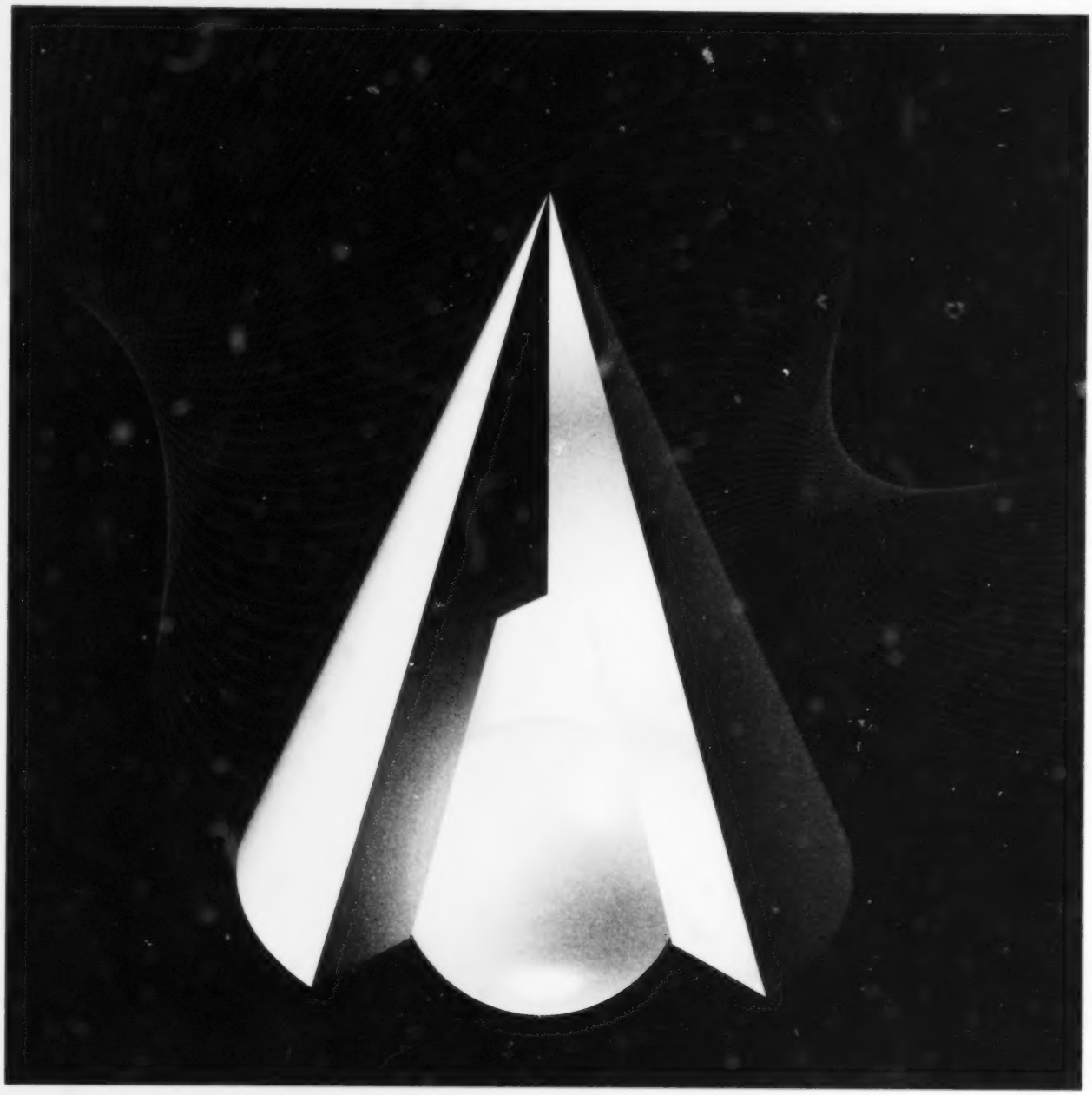
Research Paper Series

Analytical Studies

Effects of Business Cycles on the Labour Market Assimilation of Immigrants

by Abdurrahman Aydemir

No. 203



Statistics Canada Statistique Canada

Canada

ANALYTICAL STUDIES
RESEARCH PAPER SERIES

The Analytical Studies Research Paper Series provides for the circulation, on a pre-publication basis, of research conducted by Branch staff, visiting Fellows and academic associates. The Research Paper Series is intended to stimulate discussion on a variety of topics including labour, business firm dynamics, pensions, agriculture, mortality, language, immigration, statistical computing and simulation. Readers of the series are encouraged to contact the authors with comments, criticisms and suggestions. A list of titles appears at the end of this document.

Papers in the series are distributed to Statistics Canada Regional Offices, provincial statistical focal points, research institutes, and specialty libraries. These papers can be downloaded from the internet at *www.statcan.ca*.

Publications Review Committee
Analytical Studies Branch, Statistics Canada
24th Floor, R.H. Coats Building
Ottawa, Ontario, K1A 0T6
(613) 951-1804

Effects of Business Cycles on the Labour Market Assimilation of Immigrants

by

Abdurrahman Aydemir

No. 203

11F0019 No. 203
ISSN: 1205-9153
ISBN: 0-662-34483-9

Family and Labour Studies
Statistics Canada
and
Department of Economics
The University of Western Ontario

Ottawa, Ontario
K1A 0T6
Telephone: (613) 951-3821
Facsimile Number: (613) 951-5403

July 2003

I would like to thank Charlie Beach, Miles Corak, Chris Robinson, and Chris Worswick for helpful discussions. This paper also benefited from comments of 2002 CERF conference participants and seminar participants at Statistics Canada and UWO.

This paper represents the views of the author and does not necessarily reflect the opinion of Statistics Canada.

Aussi disponible en français

Table of Contents

1 Introduction *1*

2 Data *4*

3 Analysis *6*
3.1 Multivariate Analysis of LFP and Employment *7*
3.1.1 Fixed Effects Specification *7*
3.1.2 Sensitivity of Results to Controls for Unemployment Rate at Entry *12*

4 Conclusions *14*

Figures *15*

Tables *17*

Appendix I – Flexible Form Specification *36*

References *39*

103-06239/

Abstract

This study addresses the effects of macroeconomic conditions on labour market outcomes of immigrants. It simultaneously identifies the separate effects of macro conditions at the time of entry to the labour market and at the time of the survey on labour market outcomes of immigrants, while allowing for cohort effects. Also, for the first time in the literature the impacts on labour force participation along with employment outcomes are explored. Using 19 annual cross-sections of Survey of Consumer Finances covering the period 1979 to 1997. The results suggest that the deterioration in the assimilation of recent immigrants is partly due to the adverse economic conditions they face in the year they enter the labour market and subsequently. Macro conditions at the time of entry to the labour market have adverse impacts on both labour force participation and employment. With the inclusion of controls for macro conditions the significance and magnitude of the coefficient measuring assimilation increases. Therefore, not only the estimated cohort effects but also the assimilation profiles are sensitive to the inclusion of controls for business cycles.

Key Words: Immigration, Business Cycle, Cohort Effects, Economic Assimilation, Labour Force Participation, Employment

JEL Classification: J61, J21, E32

1. Introduction

The Labour market success of immigrants is the subject of considerable research in the economics literature, receiving a lot of attention in recent years with the reported decline in performance of recent immigrant cohorts. Identifying the factors causing this deterioration is crucial from a policy perspective since different factors call for different policy prescriptions.

The immigration literature tries to explain differences in labour market outcomes of different immigrant arrival cohorts by differences in observable characteristics and by cohort effects. In standard earnings regression observed characteristics refer to such characteristics as schooling and experience, while cohort effects are generally interpreted as other unobserved "quality" differences. Accounting for the phase of the business cycle immigrants face both at the time of arrival and during the survey year is important since this may affect their labour market prospects in the host country. If these macro conditions are not controlled for, one may conclude that there are significant cohort effects and interpret them as "quality" differences across cohorts, when in fact they are due to the business cycle.

The goal of this paper is to explore the role of macroeconomic conditions in determining the labour market success of immigrants. Allowing for cohort effects, both effects of macro conditions at the time of arrival and at the time of survey year are explored. Previous research, however, studies either the effects of macro conditions at arrival by assuming away the cohort effects, or the effects of macro conditions at the time of the survey allowing for cohort effects. In this second approach cohort effects also embody the effects of macro conditions at the time of arrival, therefore, separate identification of the effects of macro conditions at entry is not possible[1]. This study identifies separate effects of all three factors simultaneously, that is cohort effects, effects of macro conditions at arrival, and effects of macro conditions in the survey year. The importance of controlling for macroeconomic conditions in interpreting cohort effects is discussed by exploring the sensitivity of the estimated cohort coefficients to the inclusion of controls for the business cycle.

Another difference from the previous literature is also in terms of how labour market assimilation is captured. Job market opportunities and the opportunity cost of not working as measured by wages vary by the phase of the business cycle. Therefore, macroeconomic conditions are likely to have an impact on Labour Force Participation (LFP) decisions, as well as whether an immigrant will be able to secure a job conditional on participation and how good the fit will be between the job and the skills of the immigrant. Existing studies focus on the effects of macro conditions on assimilation of immigrants by exploring effects either on earnings or the incidence of employment (unemployment). For a new immigrant, however, the first challenge is to decide when to enter the labour force. This paper extends the previous literature by exploring the effects of macro conditions on LFP along with the employment outcome. Identifying difficulties that immigrants may be facing at the LFP

[1] The only exception to this is McDonald and Worswick (1998).

margin is important in determining the best policy to help them. Studies that focus on incidence of employment (unemployment) and earnings examine a selected group of individuals, those who participate in the labour force and those who are successful enough to get a job and report positive earnings correspondingly. Therefore, it is important to understand the selection mechanism that shapes the pool of individuals that are in the labour force.

The literature addressing the effects of macro conditions on immigrant assimilation explores the impact of macro conditions at arrival and the impact of current (survey year) macro conditions. For the macro conditions at arrival, the question is whether arriving during a worse economic environment shifts an immigrant's assimilation profile down causing a permanent disadvantage? On the other hand, different macro conditions at the survey year are thought to cause movements along this assimilation path. Therefore, for assessing the rate of assimilation current macro conditions need to be taken into account since rate of assimilation is sensitive to between which points (i.e. survey years which may represent different macro conditions) it is measured. This sensitivity may be even more so for young immigrants since they are more likely to be affected by the business cycle. Chiswick, Cohen and Zach (1997) argue that employers have less information about the credentials and characteristics of new immigrants resulting in more mismatches between employers and employees that will lead to more separations. This may also lead to less firm specific training and seniority among young immigrants and therefore they may be more affected from an economic downturn. As years of residence in the host country increases, however, immigrants are expected to become more insulated from the effects of business cycles.

Previous literature has uncovered several facts on the impact of macro conditions. Stewart and Hyclak (1984), using the 1970 US Census found that a higher annual growth rate in real GNP in the period of *entry* was associated with higher immigrant earnings among the foreign-born. Nakamura and Nakamura (1992), using 1980 US Census and 1981 Canadian Census, found that for both immigrants and the native born a higher unemployment rate in the year of labour market *entry* was significantly associated with a lower current hourly wage. The results also showed that the effect of unemployment rate at the time of *entry* is stronger for immigrants than natives. Chiswick, Cohen and Zach (1997) use Current Population Survey and show that poor labour market conditions at the time of *survey* have an adverse effect on employment probability and there is weak support for the hypothesis that immigrants are more cyclically sensitive to the current macroeconomic conditions than the native born. However, poor macro conditions at the time of *entry* are found to have no adverse effect on employment opportunities or the incidence of unemployment among immigrants. Using 1990 US Census, Chiswick and Miller (1999) find that earnings are lower among those who enter the US labour market in a period of high unemployment. By interacting the unemployment rate at labour market entry with duration in the US, they test whether the effects of macro conditions at entry vary by duration of residence in the destination and they find that this effect is temporary. These studies test the effect of macro conditions at entry and at the survey year on employment and earnings, however, they do not allow for cohort effects.

Using eleven cross-sectional surveys of Survey of Consumer Finances (SCF), McDonald and Worswick (1997) find that immigrants from recent arrival cohorts have higher unemployment probabilities than similar non-immigrants in survey years corresponding to a recessionary period. However, this differential disappears as the number of years of residence increases. Using the same data, McDonald and Worswick (1998) report a significant impact of the current macroeconomic conditions (at the time of survey) on the earnings of immigrants. They also note that controlling for the unemployment rate at the time of entry to the labour market is found to have a negative but insignificant impact on earnings, but these results are not presented in the paper.

This paper shares a methodology similar to McDonald and Worswick (1998). Both studies allow for cohort effects and control for the effect of current macro conditions (at the time of survey). McDonald and Worswick use public-use files of SCF's where immigrant arrival cohorts can only be identified over an extended period such as 1956-65. It is not possible to identify in which year over this period an immigrant has arrived. Therefore, in order to control for entry macro conditions either the average unemployment rate over this ten-year period or unemployment rate in a specific year within this period has to be used. Chiswick et al. (1997) discuss in their study that using an average unemployment rate over a period of three years after an immigrant's arrival is less appropriate as a measure of labour market conditions at entry than is the unemployment rate at the year of arrival. The macroeconomic environment can change substantially even over a three-year time frame. Therefore, in a rapidly changing macroeconomic environment, measures other than the unemployment rate at the year of arrival will be a poor measure of macro conditions at entry. McDonald and Worswick's (1998) finding that entry macro conditions have no significant impact may be partly because the measure used does not adequately reflect the conditions at entry. This paper uses master files of SCF's and is able to identify the year of immigration for immigrants consistently across all survey years. This provides a better measure of macro conditions at entry.

Secondly, McDonald and Worswick (1998) use survey years 1981-92 and the latest immigrant cohort they can identify using the public use files is the 1976-80 immigrant arrival cohort. In this study immigrants who arrived up to 1996 are identified using survey years covering 1979-97. This allows the experiences of immigrant cohorts, including the recent arrival cohorts, to be studied over a longer period of time. The declining performance of recent immigrant cohorts has attracted a lot of attention and the study addresses their performance relative to earlier cohorts and explore the role macro economic conditions played in creating differences between recent and earlier immigrant cohorts.

Finally, McDonald and Worswick's (1998) focus is on earnings. This study focuses on LFP and employment outcomes. This allows an exploration of the impacts of macro conditions at different stages of transition to the labour market.

Given the reported decline in the performance of recent immigrants, the interesting questions in this context are whether the timing of immigration has a permanent effect (a 'scarring effect' as it is sometimes called) on how well immigrants assimilate, and if a permanent effect exists what are the appropriate policy tools to address the issue. In the

Canadian context, before the early 1990s, the government cut the level of immigration during recessions when the "absorptive capacity" of the economy was believed to be low. The screening process was used to adjust the level and composition of immigrants. As an example, during 1983-85 all independent immigrants were required to have arranged employment to get admission. This resulted in a sharp decline in the number of individuals accepted under independent class (see Table 2.1 for changes in class composition of immigrants over 1980 to 1998). Starting with the early 1990s recession and the following boom the Canadian government moved away from this pattern. The effect of macro conditions on immigrants is a concern for other immigrant receiving countries as well and several other countries have immigration policies tailored to take into account the stage of the business cycle. Australia changes the annual immigration quotas on the basis of the state of the economy. The United States may implicitly do so through administrative tightening of criteria for labour market visas, although this constitutes a small portion of total migration to the US (Chiswick, Cohen and Zach, 1997). Israel, on the other hand, doesn't tie its immigration policies to the short-term labour market conditions. Given the different practices of major immigrant receiving countries, it is interesting to compare relative performance of immigrant cohorts arriving over different phases of the business cycle.

The results show that cohort effects are very sensitive to the inclusion of controls for macroeconomic conditions. Without controls for macroeconomic conditions there are significant negative cohort effects for the latter immigrant cohorts suggesting that they are doing worse than the earlier immigrant cohorts. Controlling for macro conditions and allowing the effects to vary between immigrants and native-born results in cohort effects to become significantly smaller. This result suggests that the deterioration in assimilation of recent immigrants documented in the previous literature is partly due to the adverse economic conditions.

Macro conditions at the time of entry to the labour market have adverse impacts on LFP and employment probability. A higher unemployment rate at the survey year has a stronger negative effect on both. With the inclusion of controls for macro conditions the significance and magnitude of the coefficient measuring assimilation (coefficient on *years since migration*) increases. Therefore, not only the estimated cohort effects but also the assimilation profiles are sensitive to the inclusion of controls for business cycles.

2. Data

The data used in this study comes from the Survey of Consumer Finances (SCF) master files. The SCF was carried out in a two-week period in each April between 1980 to 1998. The individuals are a weighted sample of all individuals 15 years of age and older in Canada at the time of the survey. A set of sample weights are provided and used in the estimation to enable generalizations of results to the Canadian population. Immigrants are identified by their year of arrival in the master files. This makes it possible to identify immigrant cohorts by each year of arrival compared to the public use files where immigrants are identified as multi year arrival cohorts that are overlapping for arrival years

after 1990. The SCF, however, doesn't provide information on visa category or country of origin for immigrants. The SCF yearly files are a supplement to the April Labour Force Survey (LFS) where in addition to the questions asked in the LFS for the *reference week*, the SCF asks additional detailed income questions about the previous year (*reference year*). Therefore, for example, in the 1990 survey year, questions regarding the reference week refer to the activity in the week containing the 15th of April 1990, whereas questions for the reference year refer to 1989. Using SCF files it is possible to explore several dimensions of labour market activity, such as LFP, employment and earnings.

The study restricts the SCF sample to males who were between the ages of 25 and 55 in the survey year. The native-born sample is a 15% random sample of all non-immigrant men age 25 to 55 in the survey year. Immigrants are restricted to those whose age at migration was over 17. The former age restriction is intended to focus on men that are likely to have finished their education and are not yet at the mandatory retirement age. The latter restriction on age at migration is intended to focus on the effect of business cycles on immigrants who come in as adults and are less likely to have host country specific education. The experiences of the immigrants who arrive at the host country at younger ages and the effects of the business cycles on them may be quite different, more like the effect of business cycles on Canadian-born. Also excluded are those immigrants whose year of arrival is the same as the reference year. These individuals spend less than one full year during the reference year in the host country after their arrival. Therefore, measures of LFP, earnings and employment for the reference year refer to a shorter period of time for these individuals compared to others who arrived prior to the reference year.

Using samples of immigrant and Canadian-born individuals drawn from SCF datasets the role of macro economic conditions on LFP and employment is studied. The study focuses on immigrants who arrived from 1966 to 1996. In the SCFs it is possible to identify immigrants who migrated prior to 1966, however, due to small sample sizes (especially in the later survey years) these immigrants are left out of the analysis. In existing literature cohort definitions are dictated by the information available in data on year of immigration. For example the public use files of SCF identify only the multi-year period over which an immigrant has arrived, such as 1976 to 1980, which leads to a cohort definition of 1976-80. In the master files exact year of immigration is identified. Cohorts in this paper are defined as 1966-70, 1971-75, 1976-79, 1980-82, 1983-85, 1986-89, 1990-92 and 1993-96 cohort. These cohort definitions are motivated by important shifts in immigration policy regime, business cycle dates and the trends in the country of origin and class composition of immigrants over years. Over the 1966-79 period country of origin of immigrants shifted from Western Europe to Eastern Europe and Asia. This was a result of the regulatory changes in immigration policy in early 1960s that abolished the policy that gave preference to British, French and American citizens and set limits on immigrants from Asiatic countries. The cohorts that arrived after this period are defined by shorter periods reflecting the important changes in immigration policy and business cycle dates. The 1980-82 cohort arrived during early 1980s recession. The 1983-85 cohort arrived during a period when immigration under the skilled-worker category required an arranged employment (this restriction significantly altered the composition of immigrants by visa category). The 1986-89 cohort arrived during the following boom, while the 1990-92 cohort arrived

during the 1990s recession. Finally, the 1993-96 cohort arrived at the start of the recovery following the severe recession of early 1990s. Furthermore, 1990 marks the year when the immigration policy that tailored the immigration levels to the macro conditions was abandoned and this resulted in a significant increase in the level of immigration.[2]

The outcome variables are ***LFP*** and ***Employed***. *LFP* is a dichotomous variable equal to one if the male respondent was in the labour force any time during the reference year, zero if he was not employed and didn't look for work for the whole year. *Employed* is defined for only labour force participants. It is equal to one if respondent had positive earnings during the reference year; zero if he didn't have any positive earnings.[3]

LFP is an indicator of the first stage of transition to the labour market, the labour force participation decision; *Employed* is an indicator of success in finding a job given the respondent decides to participate in the labour force.[4]

3. Analysis

This section first summarizes the trends in LFP and Employment in Figures 1 and 2 over the 1979-97 period using the SCF data. Figure 1 presents the LFP rates for immigrants and Canadian-born which shows a downward trend for both groups over the sample period. The adverse effects of early 1980s and 1990s recessions on participation rates are evident. The decline in LFP rates for immigrants during recessions is higher than that for the Canadian-born. Immigrants have slightly higher participation rates in the early 1980s relative to Canadian-born, however, after the 1990s recession this pattern reverses and immigrants have relatively lower participation rates. The gap remains between the two groups until the end of the sample period. Figure 2 presents the employment rates for labour force participants.[5] Employment rates are similar for both groups until the 1990s and again a drop in employment rates of immigrants relative to Canadian-born is observed starting with the 1990s recession. The gap closes between the two groups to some extent in the following boom. The effects of business cycles are evident on both groups with a fall in employment rates during recessions and a recovery after each recession. The sharp decline

[2] Sensitivity of results to alternative cohort definitions is explored. Two alternative specifications estimated: first, a specification which defined cohorts as simple 5 year arrival cohorts (1966-70,..., 1986-90,...) and a second one where cohort definitions used in this paper for immigrants that arrived before 1980 is modified to allow for a more detailed cohort definition. Results are found to be robust to these alternative definitions.

[3] This measure of employment is compared below to the employment rate obtained from information on the number of weeks worked conditional on labour force participation.

[4] The literature that studies earnings outcomes of immigrants concentrates on those individuals who are labour force participants and report positive earnings.

[5] Figure 2 presents the incidence of positive earnings (IPE) for labour force participants. In Figure 3, for the immigrants who are labour force participants the trend in IPE is compared to employment rates obtained using the information on number of weeks worked in the reference year. The two series are very close to each other. Employment rates using information on number of weeks worked is slightly higher since some individuals might have worked but reported neg_tive earnings (such as those self-employed). In the rest of the paper the IPE for participants is referred to as employment rate.

in performance of immigrants in early the 1990s recession in terms of both LFP and employment is especially notable.[6]

The deterioration in the performance of immigrants may be due to the differences in observed and unobserved characteristics of different immigrant cohorts.[7] Also, the phase of the business cycle and the severity of the 1990s recession might have played a role in this outcome.

Table 1 shows that immigrant arrival cohorts prior to 1980 are older than Canadian born in the survey year whereas more recent immigrants are younger. More recent immigrant arrival cohorts have higher education than their predecessors and also relative to the native born. For example, 61.3% of 1993-96 cohort has a post secondary certificate/diploma, or a university degree, compared to only 38% of the native-born. Immigrants are over represented in Ontario and BC and the fraction of immigrants that choose to live in large urban areas increased with more recent arrival cohorts. There is also a shift in the mother tongue of immigrants from English and French to other mother tongues. This observation is consistent with the shift in the country of origin of immigrants from West Europe to Asia and other non-European countries over this period.[8] In the next section, using a fixed-effects specification the effects of macro conditions on immigrants' assimilation is explored along with the cohort effects.

3.1 Multivariate Analysis of LFP and Employment

3.1.1 Fixed Effects Specification

The immigration literature studying earnings assimilation uses a parametric specification, with assimilation being captured by years since migration and differences across cohorts captured by cohort dummies that allow for a separate intercept shift for each cohort. This conventional approach is called a fixed-effects model and the corresponding Binary Choice Model (BCM) is given by:

$$I_i(t) = X_i(t)\beta + \sum_{j=1}^{J} \delta_j C_i^j + \alpha_1 YSM_i + \alpha_2 YSM_i^2 + u_i \qquad (1)$$

[6] The early 1990s recession was very severe relative to previous recessions. Bodman and Crosby (2000) give the number of quarters it takes the economy to surpass its previous peak after the contraction ended. After the 1981-82 recession it took three quarters to reach the previous peak. After the 1990-91 recession it took 9 quarters. The longest recovery period observed after a recession was three quarters in the aftermath of the 1947-48 recession.

[7] Differences between immigrants and native-born outcomes controlling for observable characteristics are explored in the appendix using a "flexible form". When different immigrant cohorts at similar points since their arrival are compared (without controlling for macro conditions), more recent immigrant cohorts are found to be doing worse than their predecessors. Controlling for observed characteristics more recent immigrants had lower labour force participation rates and employment rates than their predecessors.

[8] There is no information in the SCF's on the country of birth except the information whether or not an individual was born in Canada. Therefore changes in the distribution of the country of birth over time can not be addressed with this data.

Specification (1) is estimated by merging data across all survey years and X refers to the following set of characteristics:

$$X_i(t) = \{\text{education, region of residence, size of the centre of residence, mother tongue, marital status, age}\}^{9}$$

C^j is a cohort dummy equal to 1 for immigrants in cohort j, 0 otherwise. YSM is the number of years an immigrant spent in the host country. This model is extended to control for macro conditions by the following BCM:

$$I_i(t) = X_i(t)\beta + \sum_{j=1}^{J} \delta_j C_i^j + \alpha_1 YSM_i + \alpha_2 YSM_i^2 + \phi_e U_i^e + \phi_s U_i^s + u_i \qquad (2)$$

In specification (2) U^e refers to the country-wide unemployment rate at entry and U^s refers to the unemployment rate at the survey year. Given significant differences in terms of labour market conditions across provinces, survey year unemployment rate is captured at the provincial level using the information about the region of residence for individuals in each survey year. For the native-born U^e refers to the labour market conditions at the year of completion of schooling calculated as (Survey Year less Years of Schooling less 6).[10] For immigrants it refers to the unemployment rate at the year of completion of schooling if highest degree is obtained after arrival to the host country.[11] Otherwise, it refers to the unemployment rate at the year of immigration.[12] There is no information in the data about the province an individual first lived or for how long after completion of schooling for the native-born and after arriving to the host country for immigrants. Therefore, the national unemployment rate is used to capture macro conditions at entry.

Specification (2) restricts the effects of macro conditions at the time of entry and at the survey year to be the same for immigrants and native-born. The previous literature has evidence that immigrants can be more sensitive to the business cycle than natives. To allow for this possibility specification (2) is extended to include various interaction terms that leads to results in columns (3) to (8) of the relevant tables.

---

[9] See Table 8 in appendix for variable definitions used in multivariate analysis.

[10] This assumes no interruptions in the course of schooling for labour market or other reasons.

[11] For example, age 22 is assumed to be the age of completing university. If an individual's age at migration is 18 and he reports having a university degree, then this individual is assumed to have obtained the university degree after migrating to Canada. Year of entry to the labour market and U^e are calculated accordingly.

[12] In the analysis the immigrant sample is restricted to adults who were at least 18 years old at arrival. Most of this group will have finished their schooling by that time. The group that is most likely to get further education in the host country is the age group 18 to 22 at the time of migration. This group constitutes 4.8% of male immigrants and close to 50% of this group has high school or less education in survey year 1997. This indicates that by the time this group arrived in Canada they have most likely completed all their schooling in the source country. This is consistent with the findings of Hashmi (1987) which has shown that adult immigrants have on average very little post-immigration schooling.

In the above a cohort is defined as those immigrants arriving over a number of years, such as 1986-89. Within a given cohort immigrants arrive at different years and face different labour market conditions. This variation of macro conditions at entry among immigrants within a given cohort allows for the separate identification of cohort effects and macro conditions at entry.[13,14] The interpretation of cohort effects in this context is then the unobserved differences common to immigrants within a given cohort. The literature interprets these cohort effects as differences in "unobserved quality." This may be driven by changes in immigration policy resulting from changes in source country and visa category distribution of immigrants, or by changing incentives to immigrate that affect unobserved quality of immigrants. A separate BCM is estimated for each of the outcomes of interest, that is LFP and Employment and the results are presented in Tables 3a and 4a. Tables 3b and 4b present the corresponding estimated marginal effects.[15]

For each of the outcome variables eight different specifications are estimated. The first specification is the fixed-effects specification (1) of Section 3.1.1 that controls for years since migration but doesn't control for macro conditions (column (1) in Tables 3 to 6); the second column is the specification (2) of Section 3.1.1 which in addition controls for macro conditions at entry and at the survey year but restricts the effects of macro conditions to be the same for immigrants and native-born. Next specification (column (3)) allows for assimilation profiles of immigrants to be affected by the macro conditions at entry by including an interaction term of YSM with U^e. Following the earlier literature, column (4) introduces interaction terms of U^s with cohort dummies (McDonald and Worswick (1998) allow for interaction terms for $cohort \times U^s$ and $cohort \times U^s \times ysm$ in their analysis of earnings). A larger negative coefficient on the interaction term for more recent cohorts is interpreted as more recent immigrants being more sensitive to the current macro conditions. However, these interaction terms may be confounding the cohort quality (captured by cohort dummies) with effects of current macro conditions (U^s). For that reason, column (5) employs an alternative specification that replaces $cohort \times U^s$ interaction terms. This new specification has two variables: *unsy1t10*, capturing the effect of current macro conditions on a recent labour market entrant (the product of U^s with a dummy variable indicating entry to the labour market in the last 10 years); *m_unsy1t10*, capturing the additional impact of current macro conditions on immigrants who entered the labour market recently ($migrant\ dummy \times unsy1t10$). As discussed previously, new immigrants may be more adversely affected by an economic downturn. However, for those

[13] There is significant variation in labour market conditions at entry for both immigrants and native-born. Immigrants in the sample arrive over the 1966-96 period, whereas native-born could have finished their schooling over a period from the early 1940s to 1996.

[14] If cohorts were defined as single year arrival cohorts, both the effects of unemployment at entry and cohort effects could still be identified if a common effect of macro conditions at entry is assumed for both immigrants and native-born. However, identification of the differential impact of entry macro conditions on immigrants is not possible in this case. In all other cohort definitions this identification is possible. The practice in the immigration literature has always been to define cohorts as multi-year arrival cohorts. This paper adopts the same approach in defining cohorts.

[15] Other control variables are used in estimation but not presented in these tables for conciseness. Those include controls for region of residence, size of the centre of residence, education, age, marital status and mother tongue.

natives who entered the labour market recently they may have acquired the skills rising in demand in the labour market, may be able to adapt to changing conditions more easily than older workers, and firms may invest more in them given young workers' longer expected work-lives. Therefore, they may be more insulated from the adverse impacts of business cycles.

Columns (6) to (8) check sensitivity of results to the specification in column (5), especially to the inclusion of controls for U^t. These results will be discussed in the next section.

The important result that emerges from Tables 3a and 4a—which is consistent across both models of LFP and Employment outcomes—is that cohort effects are very sensitive to the inclusion of controls for macroeconomic conditions. In all three models the specification that doesn't control for macro conditions (column (1)) shows significant cohort effects, suggesting that controlling for years since migration, latter immigrant cohorts are doing worse than earlier immigrant cohorts. Controlling for common effects of macro conditions on immigrants and native-born in the next specification causes the cohort effects to become smaller, however, there still remain significant cohort effects. Adding (*ysm*×*unemployment at entry*) interaction term in the next specification (column (3)) doesn't result in any significant changes in other coefficient estimates and the estimated coefficient for this interaction term is insignificant. This suggests that the effect of entry macro conditions doesn't vary with years of residence in the host country. Next, two specifications control for macro conditions while allowing the effects to vary between immigrants and the native-born. However, they give drastically different results. In column (4), where cohort dummies are interacted with U^t, almost all cohort effects become insignificant. In column (5), which includes controls for recent labour market entrants, the results show that estimated cohort effects become smaller (especially so for the LFP outcome) but not all cohort effects become insignificant.

In column (4) estimated coefficients for the added interaction terms lie in the same direction as the estimated cohort effects in previous specifications (for example, in Table 3a, column (4) the coefficient estimates of the interaction term for the earliest cohort, those who arrived in the 1960s and 1970s, is positive and significant while the coefficient for the latest cohort, those who arrived in 1990s, is negative and significant). However, as discussed those interaction terms may be confounding the cohort effects with the effects of current macro conditions on immigrants. The next specification tries to overcome this problem. If as hypothesized in the previous literature it is the new immigrants that may be more cyclically sensitive, then it is sensible to allow for an interaction term to allow for this possibility. The interaction term used for this is current macro conditions interacted with a dummy indicating whether an individual entered the labour market in the last 10 years (*unsy1t10* variable) and a second interaction term which further allows a different impact on recent immigrants (*m_unsy1t10*). For survey year 1979, this last term would be capturing immigrants who arrived between 1969-78; for survey year 1985 those who arrived between 1975-84; for survey year 1996 those who arrived between 1986-95, etc. By construction this interaction term, while controlling for recent labour market entry, is not related to any specific arrival cohort, contrary to the specification in column (4). This

latter specification is the preferred and discussions in the remainder of this section will address the results emerging from it.

The decline in cohort effects between column (1) and column (5) suggests that without controlling for macro conditions the cohort effects captures differences in performance of immigrants resulting from different macroeconomic conditions along their assimilation path as well as the other unobserved characteristics. Especially for the LFP outcome an important part of the deterioration as portrayed by cohort effects in column (1) disappears once macro conditions are controlled. For example, for the 1993-96 cohort Table 3b shows that without controls for macro conditions this cohort had 7.6 percentage points lower labour force participation. Controlling for macro conditions this differential drops to 3.3 percentage points. Unfavourable macro conditions may be resulting in withdrawal of many immigrants from the labour market who may be investing in human capital skills or may simply be discouraged by their prospects in the labour market.

For the employment outcome, after controlling for macro conditions, there still remain strong cohort effects for immigrants who landed after 1986 which suggests a declining quality among labour force participants. The impact of controlling for macro conditions on estimated cohort effects is less in this case. For example, Table 4b shows that without controlling for macro conditions the 1993-96 cohort had an 8.6 percentage points higher unemployment probability. This falls to 6.7 percentage points when effects of macro conditions are controlled.

Both macro conditions at entry and current macro conditions have an adverse impact on LFP and employment with the effects of the latter being much greater. The effects of entry macro conditions, however, are small for both LFP and employment outcomes. One percentage point increase in unemployment rate at the time of entry leads to a 0.1 percentage point decline in LFP and employment rates. The marginal effects for employment outcome in Table 4b suggest that a four percentage point increase in the unemployment rate at the time of entry is equal to gains from one more year of residence.[16] However, this result should not be interpreted as the overall impact of business cycles being small since the effects of survey year macro conditions are much larger. For both the LFP and employment outcome one percentage point increase in survey year unemployment rate leads to 0.5 percentage points decline in LFP and employment rates for a new immigrant. If a recession is long-lived with high unemployment rates for a number of consecutive years, then an immigrant landing at the beginning of this period can be significantly more disadvantaged than one who lands during an expansionary period.

Interaction terms for the effects of current macro conditions on recent entrants (given by *unsy1t10* and *m_unsy1t10*) provides evidence that new immigrants are more sensitive to the business cycle conditions and native-born are more insulated from these conditions. There is no evidence that effects of macro conditions at entry (a scarring effect) disappears with increasing years of residence given the insignificant coefficient on $ysm \times U^{r}$ interaction term.

[16] The unemployment rate increased by about 4 percentage points in the two recessions from 1979 to 1983, and from 1989 to 1993.

While this paper finds small but significant negative effects of entry macro conditions on LFP and employment, Chiswick, Cohen and Zach (1997) find poor macro conditions at the time of entry have no adverse effect on the incidence of unemployment among immigrants in the US. The results for the effects of survey year macro conditions and greater sensitivity of new immigrants to business cycles are, however, in line with previous studies in the literature.

The coefficient on *ysm* for the LFP outcome is positive but insignificant, whereas for the employment outcome it is positive and significant providing evidence of assimilation. With the inclusion of controls for macro conditions for the employment model the size of the coefficient for years since migration increases twofold. Similar result are obtained by McDonald and Worswick (1998) where they show that neglecting the impact of macro conditions at the survey year leads to a significant understatement in the rate of assimilation. Therefore, not only the estimated cohort effects but also the assimilation profiles are sensitive to the inclusion of controls for business cycles.

3.1.2 Sensitivity of Results to Controls for Unemployment Rate at Entry

Figure 4 plots the annual unemployment rate over 1946-98 which shows an upward trend over much of the sample period. Given that entry macro conditions are captured by the unemployment rate at the time of entry, one may be concerned that a higher unemployment rate may be a proxy for a more recent immigrant cohort. This may cause some spurious correlations by capturing any change in the unobserved components of immigrant quality over this period. To check the sensitivity of results the paper first tests for different specifications using all sample years 1979-97. Secondly, the sample is restricted to immigrants that arrived during a period over which there was no upward trend in unemployment rate and the results are replicated for this sub-sample.

First, using the entire sample the paper estimates the following specifications: Column (6) of Tables 3a and 4a omit the variables related to unemployment rate at entry. This causes a slight increase in the estimated cohort effects while the remaining coefficient estimates are mostly robust to this change in specification. Column (8), on the other hand, controls for entry macro conditions in an alternative way by dividing the range of values for unemployment at entry into five equal intervals and creating a dummy variable for each. The variable *unen5* is equal to 1 if unemployment at entry is in the interval (9.8, 11.7), and 0 otherwise; *unen4* is equal to 1 if entry unemployment rate is in the

interval (7.9, 9.8), and 0 otherwise. The resulting coefficient estimates for the common variables are very similar in columns (5) and (8).[17]

Second, the sample of immigrants is restricted to those who arrived between 1977 and 1996. The unemployment rate at entry during this period fluctuated a lot, however, it doesn't have an upward trend. In other words, a higher unemployment rate is not associated with a more recent immigrant cohort. The results in Tables 3a and 4a are replicated with this sub-sample and the coefficient estimates for LFP and Employment outcomes are presented in Tables 5a and 6a, and the marginal effects in Tables 5b and 6b correspondingly. The conclusions drawn from Tables 5a and 6a are the same as conclusions from Tables 3a and 4a, showing that results are not an artifact of a spurious correlation between unemployment rate at entry and cohort dummies.

4. Conclusions

This paper studies the effects of macroeconomic conditions on labour market outcomes of immigrants. Allowing for cohort effects, both effects of macro conditions at the time of arrival and at the time of survey year are explored. Previous studies in the literature, however, study either the effects of macro conditions at arrival by assuming away the cohort effects, or the effects of macro conditions at the time of the survey allowing for cohort effects. Also, for the first time in the literature this paper explores the impacts on labour force participation. Using 19 annual cross-sections of Survey of Consumer Finances covering the period 1979 to 1997 it is shown that estimates of cohort effects are very sensitive to the inclusion of controls for macroeconomic conditions. Without controls for macroeconomic conditions there are significant negative cohort effects for the latter immigrant cohorts suggesting that they are doing worse than the earlier immigrant cohorts. Controlling for macro conditions and allowing the effects to vary between immigrants and native-born results in cohort effects to become significantly smaller. This result suggests that the deterioration in assimilation of recent immigrants documented in the previous literature is partly due to the adverse economic conditions. Macro conditions at the time of entry to the labour market have adverse impacts on labour force participation and employment. The higher unemployment rate at the survey year, the stronger negative effect on both. With the inclusion of controls for macro conditions the significance and magnitude of the coefficient measuring assimilation (coefficient on *years since migration*) increases. Therefore, not only the estimated cohort effects but also the assimilation profiles are sensitive to the inclusion of controls for business cycles.

[17] To further check the sensitivity of results in column (5) for additional controls, a variable is added to the model in column (7) that is employed in the previous literature. The variable *M_unempent* interacts a migrant dummy with the unemployment at entry to test whether immigrants are more sensitive to entry macro conditions than natives are. If immigrants are more sensitive as hypothesized, this estimated coefficient would be expected to have a negative sign and the cohort effects are expected to decline. However, for LFP the coefficient estimate is positive while cohort effects become much stronger for the last three cohorts, both contrary to the expectation. For Employment outcome the coefficient estimate for *M_unempent* is almost zero, yet, it causes the cohort effects to disappear. Given these anomalous results, this variable is likely causing some spurious correlations.

In this paper the adverse impacts of the entry macro conditions are shown to be permanent but small. Therefore long term considerations may outweigh concerns resulting from the short term macro conditions in the labour market while deciding whether to tie the level of immigration to the business cycle. Also, the results showing that there is a decline in the labour force participation rate without any evidence of a catch up suggests that there may be a discouraged worker effect.

Figure 1: Labour Force Participation (LFP) Rates, Reference Year Males 25-55, Canadian-born & Immigrants - Year of imm. 1966-96

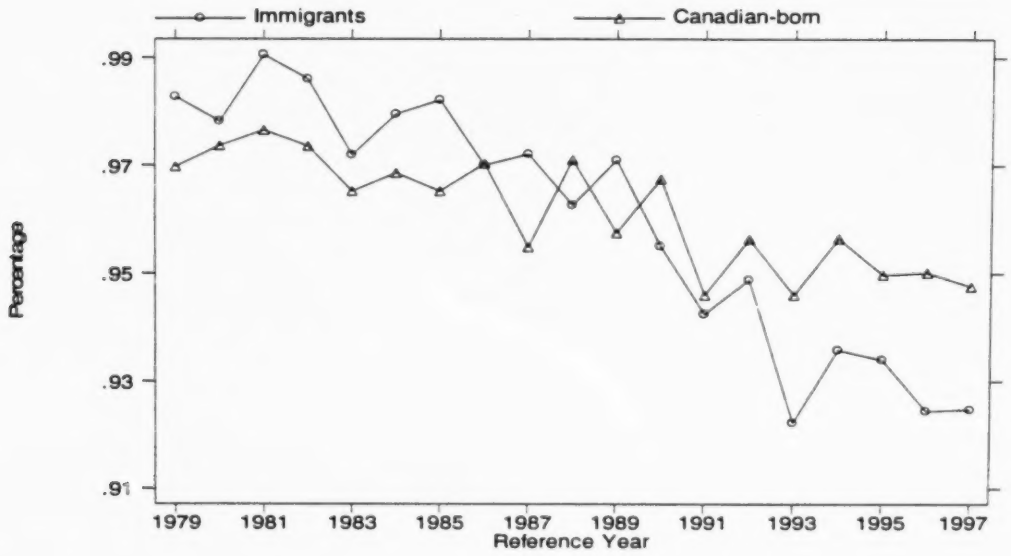


Figure 2: Employment Rates (Incidence of Positive Earnings for Labour Force Participants), Reference Year, Males 25-55 Canadian-born & Immigrants - Year of imm. 1966-96

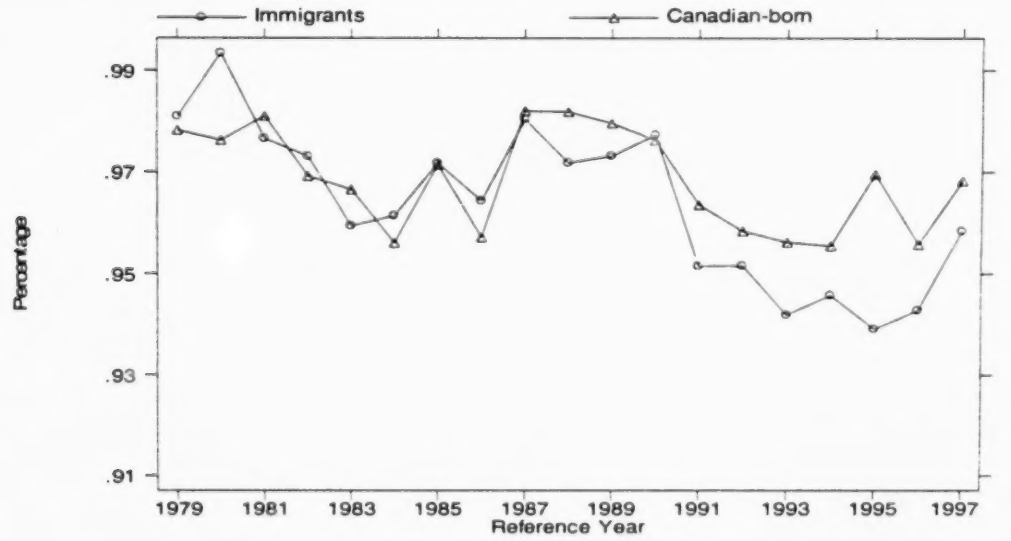


Figure 3: Incidence of Positive Earnings (IPE) for Labour Force Participants and Employment Rate for Labour Force Participants, Reference Year Males 25-55, Immigrants -Year of Immigration 1966-96

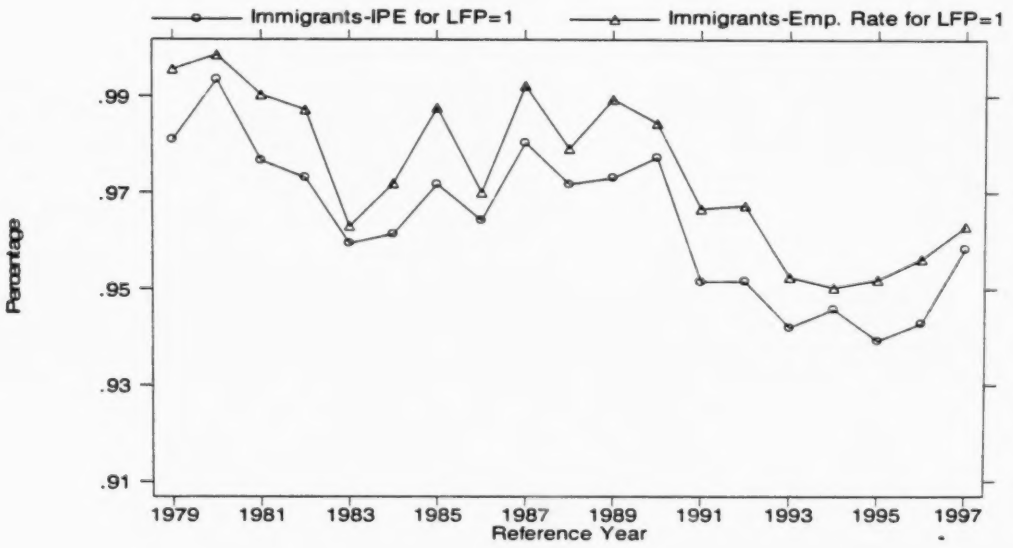


Figure 4: Annual Unemployment Rate, Canada, 1946-98

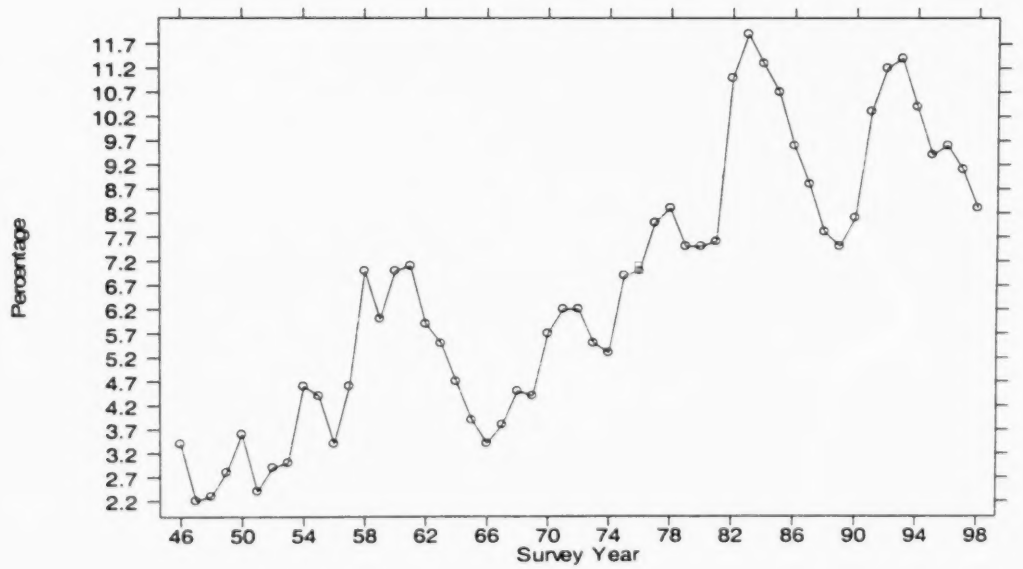


Table 1- Sample Means (%)

SCF Data

		Immigrant Cohorts							
	Canadian Born	66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Education									
0-8 years	10.6	16.5	15.0	10.1	10.0	8.7	8.4	7.3	4.5
Some sec.- no post secondary	43.1	32.1	32.1	33.9	34.4	36.9	32.4	33.2	29.5
Some post sec.	8.4	6.6	7.3	7.1	7.7	7.6	7.2	5.8	4.8
Post sec. cert or diploma	21.9	19.5	20.4	23.6	22.9	19.9	28.6	25.8	28.1
University degree	16.1	25.3	25.3	25.2	25.1	26.9	23.5	27.9	33.2
Average Age	37.9	44.4	40.9	38.3	37.1	36.2	36.2	36.7	36.8
Region									
Atlantic	9.7	1.6	1.4	1.6	1.5	1.4	0.9	0.9	1.5
Quebec	29.1	14.3	13.3	16.9	19.5	23.1	15.2	20.5	17.9
Ontario	32.7	57.2	54.7	47.7	48.4	50.4	61.6	50.6	48.2
Manitoba, Saskatchewan, Alberta	17.4	10.4	13.7	18.5	17.8	13.7	9.3	9.6	9.5
BC	11.1	16.7	16.8	15.3	15.9	11.4	13.0	18.5	22.9

Table 1 – concluded

	Immigrant Cohorts								
	Canadian Born	66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Mother Tongue									
English	65.8	39.9	38.6	34.4	26.0	20.8	19.2	15.4	14.7
French	30.7	5.1	3.6	4.8	4.2	4.3	3.3	4.1	3.8
Other	3.5	55.0	57.8	60.9	69.8	74.9	77.5	80.5	81.5
Area Size									
Urban									
>=500,000	40.6	72.3	76.6	76.7	79.7	83.6	85.1	87.3	86.1
100,000-499,999	16.0	13.8	11.5	10.8	9.3	8.7	8.3	7.5	7.7
30,000-99,999	9.3	3.8	3.3	3.5	3.8	2.3	2.7	1.8	2.3
2,500-29,999	4.2	1.7	1.5	1.4	1.5	1.0	0.7	0.6	0.4
<2,500	9.9	3.0	2.6	2.8	2.2	1.2	1.2	1.3	1.6
Rural	20.1	5.5	4.6	4.9	3.4	3.2	2.1	1.5	1.9

Source: Author's compilation based on SCF Data, Statistics Canada (1980-1998)

Table 2.1 – Distribution of Immigrants by Class
(Immigration Database, Males, Age at Migration 25-55) (%)

Landing Year	Family Class	Business Class	Skilled Worker	Assisted Relative	Refugee Class	Other
1980	20.6	4.8	33.9	13.1	27.6	0
1981	23.7	5.5	42.7	15.7	12.4	0
1982	22.9	6.3	39.3	12.0	19.4	0.1
1983	34.5	9.7	24.5	7.1	24.4	0.1
1984	37.2	8.2	18.8	10.0	25.3	0.6
1985	33.8	9.1	19.8	10.0	27.1	0.3
1986	27.5	8.2	19.3	6.7	26.2	12.0
1987	20.1	7.0	27.2	9.4	17.0	19.3
1988	16.6	10.0	37.5	12.9	22.0	1.1
1989	23.1	9.0	31.3	11.9	24.1	0.6
1990	25.9	7.4	27.4	11.7	21.6	5.9
1991	25.6	6.4	20.0	8.9	18.6	20.5
1992	27.1	9.4	14.3	7.5	18.6	23.1
1993	33.2	12.7	19.9	9.9	11.8	12.4
1994	31.5	12.8	26.6	14.4	11.1	3.5
1995	24.6	8.7	33.1	16.0	15.6	2.1
1996	19.5	8.0	39.9	14.4	14.3	3.9
1997	17.7	8.2	46.9	12.4	12.5	2.4
1998	18.4	7.3	49.2	9.5	13.6	2.0
1980-98	24.4	8.5	30.6	11.4	17.9	7.2

Table 2.2 – Mean Years of Schooling of Immigrants by Class
Males, Age at Migration 25-55, Source: Immigration Database Data

Landing Year	All Classes	Family Class	Business Class	Skilled Worker	Assisted Relative	Refugee Class	Other
1980	11.9	11.5	12.1	14.0	10.5	10.1	-
1981	12.9	11.3	12.5	14.4	11.5	12.2	-
1982	13.3	11.4	13.0	14.8	12.3	13.1	12.0
1983	13.0	12.5	13.5	14.8	11.5	12.3	12.0
1984	12.6	12.1	13.4	15.3	11.2	11.7	11.5
1985	12.9	13.0	13.9	14.2	11.8	12.1	12.0
1986	12.8	12.8	13.7	14.6	12.4	12.1	11.5
1987	12.8	12.4	13.8	14.9	12.1	12.1	10.9
1988	13.1	12.3	13.8	14.3	11.7	12.2	10.7
1989	13.0	12.1	13.7	14.6	11.1	12.3	14.1
1990	12.9	12.1	13.5	14.8	11.9	12.4	11.0
1991	12.9	12.1	13.3	15.4	12.7	12.4	12.1
1992	13.0	12.4	13.0	15.3	13.2	12.7	12.5
1993	13.2	12.0	13.2	15.6	13.7	12.7	12.2
1994	13.7	12.0	13.1	16.0	13.8	13.1	13.6
1995	14.1	12.0	13.0	16.4	14.6	12.9	12.0
1996	14.4	12.4	12.7	16.4	15.0	13.1	11.1
1997	14.7	12.5	13.0	16.4	15.2	12.8	12.1
1998	14.8	12.6	13.3	16.4	15.1	12.8	12.0
1980-98	13.4	12.2	13.2	15.5	13.1	12.4	12.0

Table 3a – Coefficient Estimates from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Labour Force Participation Outcome

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable								
Coh6670	0.409 (.12)***	0.303 (.12)**	0.176 (.18)	-0.084 (.19)	0.369 (.19)*	0.539 (.16)***	-0.158 (.33)	0.428 (.19)**
Coh7175	0.258 (.11) **	0.197 (.11)*	0.130 (.13)	-0.148 (.16)	0.342 (.17)**	0.407 (.16)***	-0.168 (.31)	0.368 (.17)**
Coh7679	0.052 (.11)	0.034 (.11)	0.005 (.12)	-0.297 (.16)*	0.240 (.16)	0.227 (.16)	-0.292 (.32)	0.237 (.16)
Coh8082	-0.067 (.11)	-0.054 (.11)	-0.068 (.11)	0.435 (.20)**	0.178 (.15)	0.130 (.15)	-0.385 (.32)	0.119 (.15)
Coh8385	-0.215 (.11)*	-0.150 (.12)	-0.131 (.12)	0.365 (.20)*	0.147 (.17)	-0.009 (.16)	-0.520 (.38)	0.055 (.17)
Coh8689	-0.350 (.09)***	-0.322 (.09)***	-0.341 (.10)***	0.149 (.20)	-0.084 (.16)	-0.128 (.16)	-0.642 (.33)*	-0.105 (.16)
Coh9092	-0.491 (.09)***	-0.424 (.10)***	-0.435 (.10)***	0.191 (.27)	-0.185 (.16)	-0.270 (.15)*	-0.801 (.35)**	-0.203 (.16)
Coh9396	-0.709 (.09)***	-0.643 (.10)***	-0.647 (.10)***	-0.74 (.27)	-0.425 (.15)***	-0.547 (.14)***	-1.098 (.37)***	-0.476 (.15)***
Ysm	0.008 (.01)	0.012 (.01)	0.034 (.03)	0.031 (.03)	0.018 (.03)	-0.008 (.02)	0.058 (.03)*	0.012 (.03)
Ysmsq	-0.001 (.0004)***	-0.001 (.0004)***	-0.001 (.0005)***	-0.001 (.0005)***	-0.001 (.0006)*	-0.0007 (.0004)	-0.002 (.0006)**	-0.001 (.0006)*
Unempent	--	-0.019 (.009)**	-0.018 (.009)**	-0.018 (.009)**	-0.024 (.009)***	--	-0.026 (.009)***	--
Unempsy	--	-0.039 (.009)***	-0.039 (.009)***	-0.039 (.01)***	-0.042 (.009)***	-0.046 (.009)***	-0.042 (.009)***	-0.040 (.01)***
Ysm*unempent	--	--	-0.002 (.002)	-0.002 (.002)	-0.002 (.002)	--	-0.006 (.003)**	-0.002 (.002)
M_unempent	--	--	--	--	--	--	0.066 (.03)**	--
M_unsy70	--	--	--	0.043 (.016)***	--	--	--	--
M_unsy80	--	--	--	-0.056 (.020)***	--	--	--	--
M_unsy90	--	--	--	-0.069 (.030)**	--	--	--	--
Unsy1t10	--	--	--	--	0.038 (.009)***	0.036 (.008)***	0.039 (.009)***	0.036 (.009)***
M_unsy1t10	--	--	--	--	-0.050 (.013)***	-0.045 (.01)***	-0.052 (.013)***	-0.048 (.01)***
Unen5	--	--	--	--	--	--	--	-0.189 (.08)**
Unen4	--	--	--	--	--	--	--	-0.234 (.07)***
Unen3	--	--	--	--	--	--	--	-0.129 (.05)***
Unen2	--	--	--	--	--	--	--	-0.186 (.04)***
Wald Chi2	1357.46	1411.88	1413.64	1445.83	1434.81	1417.34	1438.97	1442.01
No. of obs.	73130	73130	73130	73130	73130	73130	73130	73130

Note: * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.

Table 3b – Marginal Effects from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Labour Force Participation Outcome

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable								
Coh6670	0.018 (.004)	0.014 (.005)	0.009 (.008)	-0.005 (.01)	0.015 (.006)	0.02 (.004)	-0.01 (.02)	0.017 (.006)
Coh7175	0.013 (.005)	0.01 (.005)	0.007 (.007)	-0.01 (.01)	0.015 (.006)	0.018 (.006)	-0.01 (.02)	0.016 (.006)
Coh7679	0.003 (.006)	0.002 (.006)	0.0003 (.007)	-0.022 (.01)	0.011 (.006)	0.011 (.006)	-0.02 (.02)	0.011 (.006)
Coh8082	-0.004 (.007)	-0.003 (.007)	-0.004 (.007)	0.019 (.007)	0.009 (.006)	0.007 (.007)	-0.03 (.03)	0.006 (.007)
Coh8385	-0.015 (.009)	-0.01 (.009)	-0.008 (.009)	0.017 (.007)	0.007 (.007)	-0.0005 (.009)	-0.042 (.03)	0.003 (.009)
Coh8689	-0.025 (.009)	-0.022 (.008)	-0.024 (.009)	0.008 (.01)	-0.005 (.009)	-0.008 (.01)	-0.05 (.04)	-0.006 (.01)
Coh9092	-0.044 (.013)	-0.035 (.012)	-0.036 (.012)	0.01 (.01)	-0.012 (.011)	-0.019 (.01)	-0.08 (.06)	-0.013 (.012)
Coh9396	-0.076 (.017)	-0.064 (.016)	-0.064 (.017)	-0.005 (.02)	-0.033 (.016)	-0.048 (.02)	-0.144 (.09)	-0.038 (.017)
Ysm	0.0005 (.0007)	0.0007 (.0007)	0.002 (.002)	0.002 (.002)	0.001 (.001)	-0.0004 (.0009)	0.003 (.002)	0.0006 (.001)
Ysmsq	-0.0001(.00003)	-0.0001 (.00002)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)
Unempent	--	-0.001 (.0005)	-0.001 (.0005)	-0.001 (.0005)	-0.001 (.0005)	--	-0.001 (.0005)	--
Unempsy	--	-0.002 (.0006)	-0.002 (.0005)	-0.002 (.0006)	-0.002 (.0006)	-0.003 (.0006)	-0.002 (.0006)	-0.002 (.0006)
Ysm*unempent	--	--	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	--	-0.0003 (.0002)	-0.0001 (.0001)
M_unempent	--	--	--	--	--	--	0.004 (.002)	--
M_unsy70	--	--	--	0.002 (.0009)	--	--	--	--
M_unsy80	--	--	--	-0.003 (.001)	--	--	--	--
M_unsy90	--	--	--	-0.004 (.001)	--	--	--	--
Unsy1t10	--	--	--	--	0.002 (.0005)	0.002 (.0005)	0.002 (.0005)	0.002 (.0005)
M_unsy1t10	--	--	--	--	-0.003 (.0007)	-0.003 (.0007)	-0.003 (.0007)	-0.003 (.0007)
Unen5	--	--	--	--	--	--	--	-0.011 (.005)
Unen4	--	--	--	--	--	--	--	-0.015 (.005)
Unen3	--	--	--	--	--	--	--	-0.007 (.003)
Unen2	--	--	--	--	--	--	--	-0.012 (.003)

Notes: Average marginal effects for the following reference person: migrant, living in Ontario, size of centre of residence>500K, married, has some sec. ed. or post sec. ed. but no post secondary certificate or diploma, age between 30 and 34, mother tongue is neither French nor English. Average marginal effects are calculated using the estimated coefficients from Table 3a. Standard errors are calculated by delta method and presented in parenthesis.

Table 4a – Coefficient Estimates from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Employment Outcome (Conditional on Labour Force Participation)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coh6670	0.014 (.11)	-0.132 (.12)	-0.281 (.17)*	-0.267 (.20)	-0.241 (.18)	-0.069 (.14)	-0.241 (.29)	-0.250 (.19)
Coh7175	-0.114 (.10)	-0.207 (.11)**	-0.286 (.12)**	-0.272 (.16)*	-0.243 (.15)	-0.172 (.14)	-0.243 (.27)	-0.252 (.15)*
Coh7679	-0.167 (.09)*	-0.207 (.09)**	-0.240 (.10)**	-0.229 (.15)	-0.189 (.14)	-0.194 (.14)	-0.189 (.27)	-0.196 (.14)
Coh8082	-0.214 (.09)**	-0.213 (.09)**	-0.228 (.09)**	0.037 (.19)	-0.174 (.13)	-0.214 (.13)*	-0.174 (.28)	-0.192 (.13)
Coh8385	-0.252 (.10)**	-0.204 (.11)*	-0.181 (.11)	0.083 (.19)	-0.120 (.15)	-0.256 (.14)*	-0.120 (.34)	-0.137 (.15)
Coh8689	-0.394 (.09)***	-0.365 (.09)***	-0.387 (.09)***	-0.124 (.18)	-0.338 (.14)**	-0.370 (.14)***	-0.338 (.28)	-0.357 (.14)***
Coh9092	-0.535 (.09)***	-0.461 (.09)***	-0.472 (.09)***	0.105 (.28)	-0.424 (.14)***	-0.494 (.13)***	-0.424 (.31)	-0.425 (.14)***
Coh9396	-0.732 (.09)***	-0.683 (.09)***	-0.688 (.10)***	-0.164 (.27)	-0.639 (.14)***	-0.739 (.13)***	-0.640 (.33)*	-0.655 (.14)***
Ysm	0.028 (.01)**	0.034 (.01)***	0.061 (.02)**	0.058 (.02)**	0.057 (.03)**	0.029 (.01)**	0.057 (.03)*	0.059 (.03)**
Ysmsq	-0.001 (.0004)***	-0.001 (.0004)***	-0.001 (.0005)***	-0.002 (.0005)***	-0.002 (.0005)***	-0.001 (.0004)**	-0.002 (.0006)***	-0.002 (.0005)***
Unempent	--	-0.018 (.009)*	-0.017 (.009)*	-0.017 (.009)*	-0.019 (.009)**	--	-0.020 (.01)**	--
Unempsy	--	-0.073 (.01)***	-0.074 (.01)***	-0.072 (.01)***	-0.076 (.01)***	-0.079 (.01)***	-0.076 (.01)***	-0.077 (.01)***
Ysm*unempent	--	--	-0.003 (.002)	-0.003 (.002)	-0.002 (.002)	--	-0.002 (.002)	-0.003 (.002)
M_unempent	--	--	--	--	--	--	-0.000003 (.03)	--
M_unsy70	--	--	--	0.0007 (.02)	--	--	--	--
M_unsy80	--	--	--	-0.029 (.02)	--	--	--	--
M_unsy90	--	--	--	-0.063 (.03)**	--	--	--	--
Unsy1t10	--	--	--	--	0.017 (.008)**	0.015 (.008)*	0.017 (.008)**	0.017 (.008)**
M_unsy1t10	--	--	--	--	-0.016 (.01)	-0.012 (.01)	-0.016 (.01)	-0.016 (.01)
Unen5								-0.120 (.08)
Unen4								-0.085 (.07)
Unen3								-0.045 (.05)
Unen2								-0.016 (.05)
Wald Chi2	463.02	505.52	508.49	548.27	520.28	509.81	520.89	517.30
No. of obs.	70229	70229	70229	70229	70229	70229	70229	70229

Note: * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.

Table 4b – Marginal Effects from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Employment Outcome (Conditional on Labour Force Participation)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable								
Coh6670	0.001 (.007)	-0.009 (.01)	-0.023 (.02)	-0.021 (.02)	-0.018 (.02)	-0.005 (.01)	-0.018 (.03)	-0.019 (.02)
Coh7175	-0.008 (.008)	-0.015 (.008)	-0.022 (.01)	-0.021 (.02)	-0.018 (.01)	-0.012 (.01)	-0.018 (.02)	-0.019 (.01)
Coh7679	-0.012 (.008)	-0.015 (.009)	-0.018 (.009)	-0.017 (.01)	-0.013 (.01)	-0.014 (.01)	-0.013 (.02)	-0.014 (.01)
Coh8082	-0.016 (.009)	-0.016 (.008)	-0.017 (.009)	0.002 (.01)	-0.012 (.01)	-0.016 (.01)	-0.012 (.02)	-0.014 (.01)
Coh8385	-0.02 (.01)	-0.015 (.01)	-0.013 (.01)	0.005 (.01)	-0.008 (.01)	-0.02 (.01)	-0.008 (.02)	-0.009 (.01)
Coh8689	-0.032 (.01)	-0.028 (.009)	-0.03 (.01)	-0.008 (.01)	-0.025 (.01)	-0.028 (.01)	-0.025 (.03)	-0.027 (.01)
Coh9092	-0.054 (.01)	-0.042 (.01)	-0.044 (.01)	0.006 (.02)	-0.037 (.02)	-0.046 (.02)	-0.037 (.04)	-0.037 (.02)
Coh9396	-0.086 (.02)	-0.075 (.02)	-0.076 (.02)	-0.012 (.02)	-0.067 (.02)	-0.084 (.02)	-0.066 (.05)	-0.069 (.02)
Ysm	0.002 (.0008)	0.002 (.0008)	0.004 (.002)	0.004 (.002)	0.004 (.002)	0.002 (.0009)	0.004 (.002)	0.004 (.002)
Ysmsq	-0.0001(.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)	-0.0001 (.00003)
Unempent	--	-0.001 (.0006)	-0.001 (.0006)	-0.001 (.0006)	-0.001 (.0006)	--	-0.001 (.0006)	--
Unempsy	--	-0.005 (.0008)	-0.005 (.0008)	-0.005 (.0009)	-0.005 (.0008)	-0.005 (.0008)	-0.005 (.0008)	-0.005 (.0008)
Ysm*unempent	--	--	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	--	-0.0002 (.0002)	-0.0002 (.0001)
M_unempent	--	--	--	--	--	--	-0.00001 (.002)	--
M_unsy70	--	--	--	0.00005 (.001)	--	--	--	--
M_unsy80	--	--	--	-0.002 (.001)	--	--	--	--
M_unsy90	--	--	--	-0.004 (.002)	--	--	--	--
Unsy1t10	--	--	--	--	0.001 (.0005)	0.001 (.0005)	0.001 (.0005)	0.001 (.0005)
M_unsy1t10	--	--	--	--	-0.001 (.0007)	-0.001 (.0006)	-0.001 (.0007)	-0.001 (.0007)
Unen5	--	--	--	--	--	--	--	-0.008 (.006)
Unen4	--	--	--	--	--	--	--	-0.006 (.005)
Unen3	--	--	--	--	--	--	--	-0.003 (.003)
Unen2	--	--	--	--	--	--	--	-0.001 (.003)

Notes: Average marginal effects for the following reference person: migrant, living in Ontario, size of centre of residence>500K, married, has some sec. ed. or post sec. ed. but no post secondary certificate or diploma, age between 30 and 34, mother tongue is neither French nor English. Average marginal effects are calculated using the estimated coefficients from Table 4a. Standard errors are calculated by delta method and presented in parenthesis.

Table 5a – Coefficient Estimates from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Labour Force Participation Outcome- Immigrants Year of Arrival>=1977

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coh6670	--	--	--	--	--	--	--	--
Coh7175	--	--	--	--	--	--	--	--
Coh7679	-0.004 (.13)	-0.009 (.14)	-0.027 (.14)	-0.144 (.29)	0.243 (.19)	0.227 (.19)	-0.395 (.38)	0.241 (.19)
Coh8082	-0.108 (.12)	-0.088 (.12)	-0.097 (.13)	0.038 (.21)*	0.170 (.17)	0.127 (.17)	-0.478 (.37)	0.107 (.17)
Coh8385	-0.236 (.13)*	-0.170 (.14)	-0.151 (.14)	0.033 (.21)	0.149 (.19)	0.0002 (.18)	-0.573 (.42)	0.077 (.19)
Coh8689	-0.369 (.12)***	-0.336 (.12)***	-0.346 (.13)***	0.013 (.22)	-0.074 (.18)	-0.115 (.18)	-0.709 (.38)*	-0.095 (.18)
Coh9092	-0.501 (.12)***	-0.433 (.12)***	-0.436 (.12)***	0.018 (.29)	-0.163 (.18)	-0.245 (.17)	-0.856 (.39)**	-0.177 (.18)
Coh9396	-0.715 (.11)***	-0.651 (.11)***	-0.650 (.11)***	-0.081 (.28)	-0.397 (.16)**	-0.514 (.16)***	-1.150 (.42)***	-0.440 (.17)***
Ysm	0.003 (.02)	0.006 (.02)	0.022 (.04)	0.019 (.04)	0.024 (.04)	0.001 (.02)	0.086 (.05)	0.031 (.05)
Ysmsq	-0.0004 (.001)	-0.0004 (.001)	-0.0005 (.001)	-0.0004 (.001)	-0.001 (.001)	-0.001 (.001)	-0.001 (.001)	-0.001 (.001)
Unempent	--	-0.018 (.009)**	-0.017 (.009)*	-0.018 (.009)**	-0.024 (.009)**	--	-0.025 (.009)***	--
Unempsy	--	-0.042 (.009)***	-0.042 (.009)***	-0.040 (.009)***	-0.045 (.01)***	-0.049 (.009)***	-0.045 (.009)***	-0.043 (.01)***
Ysm*unempent	--	--	-0.002 (.004)	-0.002 (.004)	-0.002 (.004)	--	-0.009 (.005)*	-0.003 (.004)
M_unempent	--	--	--	--	--	--	0.074 (.04)*	--
M_unsy70	--	--	--	0.017 (.03)	--	--	--	--
M_unsy80	--	--	--	-0.055 (.02)***	--	--	--	--
M_unsy90	--	--	--	-0.069 (.03)**	--	--	--	--
Unsy1t10	--	--	--	--	0.039 (.009)***	0.036 (.01)***	0.039 (.009)***	0.037 (.009)***
M_unsy1t10	--	--	--	--	-0.057 (.02)***	-0.053 (.02)***	-0.058 (.02)***	-0.055 (.02)***
Unen5	--	--	--	--	--	--	--	-0.189 (.09)**
Unen4	--	--	--	--	--	--	--	-0.241 (.07)***
Unen3	--	--	--	--	--	--	--	-0.132 (.05)***
Unen2	--	--	--	--	--	--	--	-0.194 (.04)***
Wald Chi2	1195.16	1253.37	1253.87	1284.03	1278.05	1262.40	1280.21	1287.71
No. of obs.	60472	60472	60472	60472	60472	60472	60472	60472

Note: * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.

Table 5b – Marginal Effects from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Labour Force Participation Outcome- Immigrants Year of Arrival>=1977

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variable								
Coh6670	--	--	--	--	--	--	--	--
Coh7175	--	--	--	--	--	--	--	--
Coh7679	-0.0003 (.01)	-0.0007 (.01)	-0.002 (.01)	-0.012 (.03)	0.014 (.009)	0.013 (.009)	-0.036 (.05)	0.014 (.009)
Coh8082	-0.009 (.01)	-0.007 (.01)	-0.008 (.01)	0.023 (.01)	0.01 (.009)	0.008 (.01)	-0.045 (.05)	0.007 (.01)
Coh8385	-0.02 (.01)	-0.014 (.01)	-0.013 (.01)	0.02 (.01)	0.0009 (.01)	0.0001 (.01)	-0.058 (.06)	0.005 (.01)
Coh8689	-0.03 (.01)	-0.029 (.01)	-0.029 (.01)	0.009 (.01)	-0.005 (.01)	-0.008 (.01)	-0.066 (.05)	-0.007 (.01)
Coh9092	-0.06 (.02)	-0.045 (.02)	-0.045 (.02)	0.012 (.02)	-0.012 (.02)	-0.02 (.02)	-0.11 (.08)	-0.014 (.02)
Coh9396	-0.09 (.02)	-0.08 (.02)	-0.08 (.02)	-0.006 (.02)	-0.036 (.02)	-0.053 (.02)	-0.182 (.11)	-0.042 (.02)
Ysm	0.0002 (.002)	0.0005 (.002)	0.002 (.003)	0.001 (.003)	0.002 (.003)	0.0001 (.002)	0.006 (.004)	0.002 (.003)
Ysmsq	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	-0.0001 (.0001)
Unempent	--	-0.001 (.0007)	-0.001 (.0007)	-0.001 (.0007)	-0.002 (.0006)	--	-0.002 (.0007)	--
Unempsy	--	-0.003 (.0008)	-0.003 (.0008)	-0.003 (.0008)	-0.003 (.0007)	-0.003 (.0007)	-0.003 (.0008)	-0.003 (.0007)
Ysm*unempent	--	--	-0.0001 (.0003)	-0.0001 (.0003)	-0.0001 (.0002)	--	-0.0006 (.0003)	-0.0002 (.0003)
M_unempent	--	--	--	--	--	--	0.005 (.003)	--
M_unsy70	--	--	--	0.001 (.003)	--	--	--	--
M_unsy80	--	--	--	-0.004 (.001)	--	--	--	--
M_unsy90	--	--	--	-0.005 (.002)	--	--	--	--
Unsy1t10	--	--	--	--	0.003 (.0006)	0.003 (.0006)	0.003 (.0006)	0.003 (.0006)
M_unsy1t10	--	--	--	--	-0.004 (.001)	-0.004 (.001)	-0.004 (.001)	-0.004 (.001)
Unen5	--	--	--	--	--	--	--	-0.014 (.007)
Unen4	--	--	--	--	--	--	--	-0.018 (.006)
Unen3	--	--	--	--	--	--	--	-0.009 (.004)
Unen2	--	--	--	--	--	--	--	-0.016 (.005)

Notes: Average marginal effects for the following reference person: migrant, living in Ontario, size of centre of residence>500K, married, has some sec. ed. or post sec. ed. but no post secondary certificate or diploma, age between 30 and 34, mother tongue is neither French nor English. Average marginal effects are calculated using the estimated coefficients from Table 5a. Standard errors are calculated by delta method and presented in parenthesis.

Table 6a – Coefficient Estimates from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Employment Outcome (Conditional on LFP) – Immigrants year of arrival>=1977

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coh6670	--	--	--	--	--	--	--	--
Coh7175	--	--	--	--	--	--	--	--
Coh7679	-0.262 (.11)**	-0.277 (.11)**	-0.304 (.12)***	0.024 (.26)	-0.160 (.16)	-0.163 (.16)	-0.215 (.32)	-0.167 (.16)
Coh8082	-0.261 (.11)**	-0.243 (.11)**	-0.256 (.11)**	-0.003 (.21)	-0.113 (.15)	-0.144 (.15)	-0.169 (.33)	-0.130 (.15)
Coh8385	-0.310 (.12)***	-0.254 (.13)**	-0.226 (.13)*	0.035 (.21)	-0.069 (.17)	-0.198 (.16)	-0.131 (.37)	-0.087 (.17)
Coh8689	-0.455 (.11)***	-0.418 (.11)***	-0.433 (.11)***	-0.179 (.19)	-0.288 (.16)*	-0.314 (.16)**	-0.343 (.33)	-0.308 (.16)**
Coh9092	-0.588 (.11)***	-0.509 (.11)***	-0.514 (.11)***	0.007 (.29)	-0.366 (.15)**	-0.431 (.15)***	-0.426 (.35)	-0.371 (.16)**
Coh9396	-0.763 (.11)***	-0.718 (.11)***	-0.716 (.11)***	-0.243 (.28)	-0.579 (.15)***	-0.671 (.15)***	-0.643 (.38)*	-0.596 (.15)***
Ysm	0.053 (.02)**	0.056 (.02)**	0.080 (.04)**	0.081 (.04)**	0.081 (.04)**	0.053 (.02)**	0.087 (.05)*	0.082 (.04)**
Ysmsq	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**	-0.003 (.001)**
Unempent	--	-0.016 (.01)	-0.015 (.01)	-0.016 (.01)	-0.019 (.01)*	--	-0.019 (.01)*	--
Unempsy	--	-0.075 (.01)***	-0.075 (.01)***	-0.072 (.01)***	-0.077 (.01)***	-0.080 (.01)***	-0.077 (.01)***	-0.078 (.01)***
Ysm*unempent	--	--	-0.002 (.003)	-0.003 (.003)	-0.003 (.003)	--	-0.003 (.004)	-0.003 (.004)
M_unempent	--	--	--	--	--	--	0.006 (.04)	--
M_unsy70	--	--	--	-0.039 (.03)	--	--	--	--
M_unsy80	--	--	--	-0.029 (.02)	--	--	--	--
M_unsy90	--	--	--	-0.058 (.03)*	--	--	--	--
Unsy1t10	--	--	--	--	0.017 (.008)**	0.016 (.008)*	0.018 (.008)**	0.017 (.008)**
M_unsy1t10	--	--	--	--	-0.0274 (.014)*	-0.024 (.01)*	-0.028 (.01)*	-0.027 (.01)*
Unen5	--	--	--	--	--	--	--	-0.111 (.08)
Unen4	--	--	--	--	--	--	--	-0.073 (.07)
Unen3	--	--	--	--	--	--	--	-0.041 (.05)
Unen2	--	--	--	--	--	--	--	-0.012 (.05)
Wald Chi2	425.17	464.61	465.44	500.99	484.89	478.45	484.85	482.40
No. of obs.	57898	57898	57898	57898	57898	57898	57898	57898

Note: * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.

Table 6b – Marginal Effects from Probit Models Using Fixed Effects Specification
1979-97 SCF Sample – Employment Outcome (Conditional on LFP) – Immigrants Year of Arrival>=1977

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coh6670	--	--	--	--	--	--	--	--
Coh7175	--	--	--	--	--	--	--	--
Coh7679	-0.023 (.01)	-0.024 (.01)	-0.027 (.01)	0.002 (.02)	-0.012 (.01)	-0.013 (.01)	-0.017 (.03)	-0.013 (.01)
Coh8082	-0.023 (.01)	-0.021 (.01)	-0.022 (.01)	-0.0002 (.01)	-0.008 (.01)	-0.011 (.01)	-0.013 (.03)	-0.01 (.01)
Coh8385	-0.028 (.01)	-0.022 (.01)	-0.019 (.01)	0.002 (.01)	-0.005 (.01)	-0.016 (.01)	-0.01 (.03)	-0.006 (.01)
Coh8689	-0.04 (.01)	-0.036 (.01)	-0.037 (.01)	-0.013 (.02)	-0.022 (.01)	-0.025 (.01)	-0.027 (.03)	-0.023 (.01)
Coh9092	-0.067 (.02)	-0.053 (.02)	-0.054 (.02)	0.001 (.02)	-0.033 (.02)	-0.041 (.02)	-0.04 (.04)	-0.033 (.02)
Coh9396	-0.1 (.02)	-0.089 (.02)	-0.089 (.02)	-0.02 (.03)	-0.061 (.03)	-0.078 (.03)	-0.072 (.06)	-0.064 (.03)
Ysm	0.004 (.002)	0.004 (.002)	0.006 (.003)	0.006 (.003)	0.006 (.003)	0.004 (.002)	0.006 (.003)	0.006 (.003)
Ysmsq	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)	-0.0002 (.0001)
Unempent	--	-0.001 (.0007)	-0.001 (.0007)	-0.001 (.0007)	-0.001 (.0007)	--	-0.001 (.0007)	--
Unempsy	--	-0.005 (.001)	-0.005 (.001)	-0.005 (.001)	-0.005 (.001)	-0.006 (.001)	-0.005 (.001)	-0.005 (.001)
Ysm*unempent	--	--	-0.0002 (.0002)	-0.0002 (.0002)	-0.0002 (.0002)	--	-0.0002 (.0003)	-0.0002 (.0002)
M_unempent	--	--	--	--	--	--	0.0004 (.002)	--
M_unsy70	--	--	--	-0.003 (.002)	--	--	--	--
M_unsy80	--	--	--	-0.002 (.001)	--	--	--	--
M_unsy90	--	--	--	-0.004 (.002)	--	--	--	--
Unsy1t10	--	--	--	--	0.001 (.0005)	0.001 (.0006)	0.001 (.0005)	0.001 (.0006)
M_unsy1t10	--	--	--	--	-0.002 (.0009)	-0.002 (.0009)	-0.002 (.0009)	-0.002 (.0009)
Unen5	--	--	--	--	--	--	--	-0.008 (.006)
Unen4	--	--	--	--	--	--	--	-0.005 (.005)
Unen3	--	--	--	--	--	--	--	-0.003 (.004)
Unen2	--	--	--	--	--	--	--	-0.001 (.004)

Notes: Average marginal effects for the following reference person: migrant, living in Ontario, size of centre of residence>500K, married, has some sec. ed. or post sec. ed. but no post secondary certificate or diploma, age between 30 and 34, mother tongue is neither French nor English. Average marginal effects are calculated using the estimated coefficients from Table 6a. Standard errors are calculated by delta method and presented in parenthesis.

Table 7a - Differences in Labour Force Participation Rates between Immigrants and Canadian-born by Arrival Cohort and Survey Year
Probit Estimates Using Flexible Forms Specification

		Immigrant Cohorts							
		66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Survey Year	Sample Size								
1979	3876	0.004	-0.009	-0.002					
		(.014)	(.018)	(.017)					
1980	1725	-0.029	-0.005	-0.042					
		(.021)	(.014)	(.031)					
1981	3868	0.007	0.010	0.001	-0.058				
		(.010)	(.010)	(.016)	(.056)				
1982	4044	0.001	0.010	0.019***	-0.031				
		(.014)	(.012)	(.007)	(.023)				
1983	1699	0.022*	-0.009	0.001	-0.021				
		(.014)	(.023)	(.026)	(.029)				
1984	3992	-0.001	-0.008	-0.062*	-0.018	-0.095			
		(.020)	(.023)	(.034)	(.031)	(.077)			
1985	3984	0.025***	0.005	-0.007	0.025***	0.008			
		(.006)	(.012)	(.019)	(.005)	(.015)			
1986	3374	-0.001	0.006	-0.022	-0.029	-0.025			
		(.015)	(.018)	(.029)	(.029)	(.032)			
1987	4587	0.015	0.021*	0.007	0.008	0.004	0.007		
		(.016)	(.012)	(.017)	(.023)	(.023)	(.029)		
1988	3933	-0.014	-0.035	-0.081*	0.013	-0.049	-0.163**		
		(.024)	(.034)	(.049)	(.015)	(.049)	(.073)		
1989	4363	0.009	0.022*	0.018	0.019	0.008	0.001		
		(.017)	(.013)	(.018)	(.016)	(.022)	(.028)		
1990	4592	-0.043	-0.052	-0.047	0.022*	-0.063	-0.086**		
		(.029)	(.036)	(.053)	(.013)	(.044)	(.043)		
1991	4493	0.018	0.021	0.034***	0.007	0.026	-0.001	-0.099	
		(.016)	(.018)	(.012)	(.022)	(.017)	(.026)	(.072)	
1992	4178	0.001	0.005	-0.040	-0.070	-0.074	-0.041	-0.066	
		(.023)	(.020)	(.050)	(.063)	(.059)	(.038)	(.056)	
1993	3974	-0.002	0.042***	0.039**	0.019	-0.035	-0.005	-0.004	
		(.031)	(.013)	(.017)	(.027)	(.055)	(.030)	(.033)	

Table 7a – Concluded Differences in Labour Force Participation Rates between Immigrants and Canadian-born by Arrival Cohort and Survey Year
Probit Estimates Using Flexible Forms Specification

		Immigrant Cohorts							
		66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Survey Year	Sample Size								
1994	4549	-0.024	-0.016	0.025	-0.028	-0.025	-0.052*	-0.104***	-0.183***
		(.028)	(.026)	(.020)	(.031)	(.033)	(.030)	(.036)	(0.065)
1995	3916	0.030*	-0.032	-0.048	-0.082	-0.058	-0.051	-0.079*	-0.078
		(.018)	(.034)	(.040)	(.051)	(.048)	(.038)	(.043)	(.049)
1996	3972	0.029	0.032**	0.019	0.008	0.017	0.011	0.006	-0.032
		(.018)	(.015)	(.023)	(.025)	(.029)	(.021)	(.024)	(.034)
1997	4011	0.012	0.016	0.038**	0.032	0.016	-0.017	-0.008	-0.064
		(.024)	(0.022)	(.019)	(.019)	(.032)	(.029)	(.029)	(.040)

Notes:
1. * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.
2. dF/dx is for discrete change of dummy variable from 0 to 1. To evaluate the marginal effect of a variable marginal effect of that variable is evaluated for each observation, and then mean over the sample of these marginal effects are found. Estimated standard errors are asymptotic standard errors computed using the delta method.

Source: Author's calculation based on SCF Data, Statistics Canada (1980 – 1998)

Table 7b - Differences in Employment Rates between Immigrants and Canadian-born by Arrival Cohort and Survey Year Probit Estimates Using Flexible Forms Specification

		Immigrant Cohorts							
		66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Survey Year	Sample Size								
1979	3763	0.007	0.017***	0.006					
		(.010)	(.007)	(.011)					
1980	1685	0.013	0.010	0.002					
		(.009)	(.007)	(.011)					
1981	3789	-0.009	-0.019	-0.032	-0.023				
		(.020)	(.021)	(.034)	(.033)				
1982	3949	0.016*	-0.004	-0.020	-0.021				
		(.010)	(.016)	(.023)	(.022)				
1983	1643	-0.014	-0.053**	0.018	-0.032				
		(.024)	(.026)	(.014)	(.030)				
1984	3865	-0.004	0.010	-0.052*	-0.018	-0.195**			
		(.018)	(.018)	(.031)	(.028)	(.090)			
1985	3875	-0.013	-0.007	-0.025	-0.051	-0.033			
		(.019)	(.017)	(.028)	(.036)	(.035)			
1986	3281	0.010	-0.003	0.012	0.004	-0.004			
		(.017)	(.022)	(.020)	(.021)	(.027)			
1987	4415	0.019***	-0.009	0.019	-0.046	-0.020	-0.055		
		(.007)	(.018)	(.016)	(.027)	(.030)	(.081)		
1988	3803	0.004	-0.008	0.014	-0.028	0.001	-0.092		
		(.015)	(.018)	(.012)	(.026)	(.007)	(.062)		
1989	4209	-0.010	-0.018	0.007	0.002	0.018***	-0.001		
		(.026)	(.023)	(.015)	(.017)	(.006)	(.016)		
1990	4422	-0.025	-0.068	-0.063	0.012	0.023***	0.020**		
		(.028)	(.052)	(.048)	(.013)	(.006)	(.008)		
1991	4280	-0.020	0.038***	0.014	0.012	-0.026	-0.043	-0.182**	
		(.037)	(.004)	(.021)	(.018)	(.037)	(.036)	(.090)	
1992	3986	0.001	0.008	-0.040	0.043***	-0.016	-0.037	-0.073	
		(.029)	(.021)	(.046)	(.006)	(.044)	(.037)	(.054)	
1993	3758	0.020	0.008	0.024	0.015	-0.022	-0.061	-0.027	
		(.025)	(.021)	(.019)	(.019)	(.049)	(.043)	(.036)	

Table 7b – Concluded
Differences in Employment Rates between Immigrants and Canadian-born by Arrival Cohort and Survey Year
Probit Estimates Using Flexible Forms Specification

		Immigrant Cohorts							
		66-70	71-75	76-79	80-82	83-85	86-89	90-92	93-96
Survey Year	Sample Size								
1994	4315	0.006	0.022*	-0.051*	-0.014	0.001	-0.019	-0.064**	-0.079
		(.020)	(.013)	(.031)	(.025)	(.025)	(.023)	(.031)	(0.050)
1995	3684	-0.021	0.015	-0.012	0.003	-0.063	-0.041	-0.032	-0.135**
		(.029)	(.016)	(.028)	(.027)	(.046)	(.029)	(.030)	(.055)
1996	3757	0.012	-0.010	0.021	-0.046	-0.023	0.026*	-0.030	-0.089*
		(.022)	(.030)	(.018)	(.043)	(.039)	(.014)	(.033)	(.051)
1997	3750	-0.005	0.006	0.026**	0.015	-0.001	0.011	0.003	-0.026
		(.029)	(0.024)	(.013)	(.019)	(.031)	(.019)	(.023)	(.035)

Notes:
1. * indicates significance at the 10 percent level, ** and *** at the 5 and 1 percent levels respectively.
2. dF/dx is for discrete change of dummy variable from 0 to 1. To evaluate the marginal effect of a variable marginal effect of that variable is evaluated for each observation, and then mean over the sample of these marginal effects are found. Estimated standard errors are asymptotic standard errors computed using the delta method.
Source: Author's calculation based on SCF Data, Statistics Canada (1980 – 1998)

Table 8 – Variable Definitions

Variable	Definition
LFP	Dummy variable equal to 1 if individual participated in the labour market in the reference year; 0 otherwise
Employed	Dummy variable equal to 1 if individual was employed in the reference year and reported positive earnings; 0 otherwise
Atl	Dummy variable equal to 1 if individual lives in Atlantic Region; 0 otherwise
Que	Dummy variable equal to 1 if individual lives in Quebec; 0 otherwise
Prair	Dummy variable equal to 1 if individual lives in Prairies Region; 0 otherwise
Bc	Dummy variable equal to 1 if individual lives in BC; 0 otherwise
Ont	Dummy variable equal to 1 if individual lives in Ontario; 0 otherwise - *excluded category*
Single	Dummy variable equal to 1 if the individual is single and never married; 0 otherwise
Wds	Dummy variable equal to 1 if the individual is widowed, divorced or separated; 0 otherwise
Married	Dummy variable equal to 1 if individual id married; 0 otherwise – *excluded category*
Urban1	Dummy variable equal to 1 if size of centre of residence 500K or more; 0 otherwise
Urban2	Dummy variable equal to 1 if size of centre of residence is 100K to 499,999; 0 otherwise
Urban3	Dummy variable equal to 1 if size of centre of residence is 30,000 to 29,999; 0 otherwise
Urban4	Dummy variable equal to 1 if size of centre of residence is less than 29,999; 0 otherwise – *excluded category*
Rural	Dummy variable equal to 1 if individual lives in a rural area; 0 otherwise
Ed08	Dummy variable equal to 1 if individual has 0 to 8 years of schooling; 0 otherwise
Edssec	Dummy variable equal to 1 if individual has some sec. ed. or post sec. ed. but no post secondary certificate or diploma; 0 otherwise – *excluded category*
Edpscd	Dummy variable equal to 1 if ind. has a post secondary certificate/diploma but no univ. degree; 0 otherwise
Eduniv	Dummy variable equal to 1 if individual has university degree or more education; 0 otherwise
Fbed08	Ed08 variable interacted with the migrant dummy
Fbedpscd	Edpscd variable interacted with the migrant dummy
Fbeduniv	Eduniv variable interacted with the migrant dummy
Coh6670	Dummy variable equal to 1 if individual is a migrant who arrived during 1966-1970; 0 otherwise
Coh7175	Dummy variable equal to 1 if individual is a migrant who arrived during 1971-1975; 0 otherwise
Coh7679	Dummy variable equal to 1 if individual is a migrant who arrived during 1976-1979; 0 otherwise
Coh8082	Dummy variable equal to 1 if individual is a migrant who arrived during 1980-1982; 0 otherwise
Coh8385	Dummy variable equal to 1 if individual is a migrant who arrived during 1983-1985; 0 oherwise
Coh8689	Dummy variable equal to 1 if individual is a migrant who arrived during 1986-1989; 0 otherwise
Coh9092	Dummy variable equal to 1 if individual is a migrant who arrived during 1990-1992; 0 otherwise
Coh9396	Dummy variable equal to 1 if individual is a migrant who arrived during 1993-1996; 0 otherwise (Control group is natives for the cohort variables)
Ysm	Years Since Migration (0 for native-born)
Ysmsq	Years Since Migration Squared (0 for native-born)
Age2529	Dummy variable equal to 1 if individual is age 25 to 29; 0 otherwise
Age3034	Dummy variable equal to 1 if individual is age 30 to 34; 0 otherwise
Age3539	Dummy variable equal to 1 if individual is age 35 to 39; 0 otherwise
Age4044	Dummy variable equal to 1 if individual is age 40 to 44; 0 otherwise – *excluded category*
Age4549	Dummy variable equal to 1 if individual is age 45 to 49; 0 otherwise
Age5055	Dummy variable equal to 1 if individual is age 50 to 55; 0 otherwise
French	Dummy variable equal to 1 if individual's mother tongue is French; 0 otherwise

Table 8 – Concluded
Variable Definitions

Variable	Definition
English	Dummy variable equal to 1 if individual's mother tongue is English; 0 otherwise - *excluded category*
Othlang	Dummy variable equal to 1 if individual's mother tongue is neither French nor English ; 0 otherwise
Unempent	Unemployment rate at entry
Unempsy	Regional unemployment rate at the survey year
M_unempent	Unemployment rate at entry interacted with migrant Dummy
Ysmunen	Unempent interacted with Ysm variable
M_unsy70	Unempsy interacted with a dummy variable that is equal to 1 if an individual is a migrant who arrived before 1980 and 0 otherwise
M_unsy80	Unempsy interacted with a dummy variable that is equal to 1 if an individual is a migrant who arrived between 1980 and 1989, and 0 otherwise
M_unsy90	Unempsy interacted with a dummy variable that is equal to 1 if an individual is a migrant who arrived after 1989, and 0 otherwise
Unen5	Dummy variable equal to 1 if unemployment rate at entry is between (9.8, 11.7]; 0 o.w.
Unen4	Dummy variable equal to 1 if unemployment rate at entry is between (7.9, 9.8]; 0 o.w.
Unen3	Dummy variable equal to 1 if unemployment rate at entry is between (6.0, 7.9]; 0 o.w.
Unen2	Dummy variable equal to 1 if unemployment rate at entry is between (4.1, 6.0]; 0 o.w.
Unen1	Dummy variable equal to 1 if unemployment rate at entry is between (2.2, 4.1]; 0 o.w. – *excluded category*
Unsy1t10	Unemployment rate at the survey year interacted with the dummy variable indicating whether the individual entered to the labour market in the last 10 years
M_unsy1t10	Unsyt1t10 variable interacted with a migrant dummy

Appendix I – Flexible Form Specification

The differences between immigrants and Canadian-born in Figures 1-3 could be caused by the differences in the observed characteristics. In order to identify the differences between the two groups holding observed characteristics constant, a binary choice model (BCM) is utilized. BCM is used to model differences in LFP and Employment using a "flexible form" that imposes no particular functional form on the relationship between years-since migration and the probability of observed outcome. In this specification:

$$I_i(t) = X_i(t)\beta(t) + \sum_{j=1}^{J}\sum_{t=1}^{T}\delta^j(t)C_i^j Y(t) + u_i(t) \qquad (1)$$

In the case when $I_i(t)$ refers to the LFP, individual i is in the labour force in period t if $I_i(t) \geq 0$, out of labour force otherwise. Probit estimation of above equation generates the probability that each individual i will be in the labour force in period t given his personal characteristics. The BCM is similarly defined for Employment outcome. The vector X is the vector of characteristics of individual i at time t and controls for the following:

$X_i(t)$={education, region of residence, size of the centre of residence, mother tongue, marital status, age}[18]

A different set of coefficients $\beta(t)$ is estimated for each survey year, allowing the effect of characteristics in X to be different in each survey year. For example, the effect of having low level of education on probability of employment may be stronger during recessions if those with fewer skills are more adversely affected by an economic downturn.

The cohort effects for immigrants are captured by C_i^j dummies that identify each immigrant arrival cohort (j=1, ..., J). The interaction of C_i^j with survey year dummy variables $Y(t)$ gives a different estimate of cohort effects $\delta^j(t)$ for each survey year. $\delta^j(t)$ shifts the intercept of the index for immigrants in each cohort in each year allowing the differences between immigrants and native-born to be sensitive to the phase of the business cycle. Cohort effects in this context may be driven by differences across cohorts in terms of years of residence in the host country, macro conditions at the time of entry and survey year and differences in unobserved quality.

Results based on probit estimation of the model using specification (1) are presented in Table 7a for LFP and Table 7b for Employment. Rather than presenting parameter

[18] See Table 8 for variable definitions used in multivariate analysis.

estimates from 19 survey years, these tables present the estimates of differences in probability of observed outcome (such as LFP) between immigrant cohorts and the Canadian-born. For example, in Table 7a for the 1976-79 cohort in survey year 1982, a coefficient of 0.019 means that an immigrant from that cohort was 1.9% more likely to be a labour force participant compared to a Canadian-born, controlling for other observable characteristics. In this table each row for a given survey year gives the cross-sectional profile of immigrant cohorts and should be comparable to results from a single cross-sectional study. A column, on the other hand, shows the experience of a given cohort over years 1979 to 1997. Similar results are presented by McDonald and Worswick (1997) analyzing unemployment probabilities using SCF files from 1982 to 1993.[19]

Results from Table 7a show the difficulties experienced by recent immigrant cohorts. For immigrant cohorts that arrived before 1985 the differences between immigrants and Canadian-born that are significant are all positive (except for 1984 and 1988 for the 1976-79 cohort) whereas, for post 1985 cohorts all statistically significant differences between immigrants and Canadian-born are negative. These results show that immigrants arriving prior to 1985 have higher participation rates whereas post 1985 cohorts have lower participation rates. For example the 1986-89 cohort had a 16.3% lower participation rate in 1988 compared to the Canadian-born in the same year. The difference between pre-1985 and post-1985 may be due to the fact that earlier arrival cohorts have spent more time in the host country. However, when the experiences of 1976-79 and the 1986-89 cohorts in the first few years after arrival are compared to that of the latter arrival cohorts at similar points after their arrival there are still negative differences for the latter cohorts but not for the earlier ones. These negative differentials become smaller over time. For the 1986-89 cohort, for example, 16.3% lower participation rate in 1988 falls to 8.6% in 1990 and no significant difference is observed for the rest of the period. Previous literature studies only the unemployment experience and earnings of immigrants. The differences found in this study among different immigrant cohorts in terms of labour force participation shows that problems with economic assimilation may start as early as at the participation stage.

Another observation from Table 7a is that although for some survey years (such as 1993 and 1994) immigrants from earlier cohorts are doing better than later cohorts this cannot be generalized to all survey years. Also, following a cohort across survey years shows that differences between a given immigrant cohort and Canadian-born can be different from one year to another. The 1976-79 cohort, for example, has 1.9% higher participation rate in 1982, but 6.2% lower in 1984. This may be due to higher sensitivity of immigrant outcomes to the changing macro conditions.

[19] Note that there are some differences in selection of samples between this study and the study by McDonald and Worswick (1997). In this study individuals who are 25-55 in the survey year are studied and the sample of immigrants are restricted to those who were at least 18 when they arrived in Canada. Age at migration restriction doesn't exist in the McDonald and Worswick study and also they restrict their sample to those who were 24 to 53 in 1982, i.e. they follow a birth cohort. Finally, the measure used by McDonald and Worswick refers to the reference week, whereas, the measures used in this study refer to the reference year.

The next table, Table 7b, presents results for the probability of being employed for those in the labour force. Patterns similar to those in Table 7a are also seen here, suggesting that more recent immigrants are having harder times at the employment margin as well. For example, the 1983-85 cohort had 19.5% lower employment rate in 1984 and the 1990-92 cohort had 18.2% lower employment rate in 1991. Table 7b illustrates that the 1986-89 cohort never had a negative employment differential that is statistically significant over these survey years. On the contrary, they had 2% higher employment in 1990 and 2.6% higher employment in 1996. Judging from these figures one would conclude that this cohort is doing relatively well. The conclusion would be quite different if the same cohort's LFP experience is assessed using information in Table 7a. The same cohort had 16.3% lower participation rate in 1988 and 8.6% lower participation rate in 1990. These figures suggest substantially lower rate of entry to the labour market, however, those who entered the labour market did relatively well. If only the most successful are entering the labour market then their employment rates and earnings rates can paint a favourable picture for the performance of that cohort. Yet, there may be substantial difficulties in the short term preventing labour market participation in the first place.

REFERENCES

BODMAN, P. and M. Crosby (2000). "Phases of the Canadian Business Cycle." *Canadian Journal of Economics*. Vol. 33, No.3, 618-633.

CHISWICK, Barry R. and Y. Cohen and T. Zach (1997). "The Labour Market Status of Immigrants: Effects of the Unemployment Rate at Arrival and Duration of Residence." *Industrial and Labor Relations Review*. Vol. 50, No. 2 (January), 289-303.

CHISWICK, B. and P. Miller (1999). "Immigrant Earnings: Language Skills, Linguistic Concentrations and the Business Cycle." *University of Chicago, Center for the Study of the Economy and the State WP 152.* (published in *J. of Population Economics*, Oct, 2001).

HASHMI, Aliya (1987). "Post-migration Investments in Education by Immigrants in the US." *Ph.D. Dissertation*. Department of Economics, University of Illinois at Chicago.

MCDONALD, T. and C. Worswick (1997). "Unemployment Incidence of Immigrant Men in Canada." *Canadian Public Policy*. Vol. 23, No 4.

MCDONALD, J. T. and C. Worswick (1998). "The Earnings of Immigrant Men in Canada: Job Tenure, Cohort, and Macroeconomic Conditions." *Industrial and Labor Relations Review*. Vol. 51, No. 3, 465-82.

NAKAMURA, A. and Masao Nakamura (1992). "Wage Rates of Immigrant and Native Men in Canada and the United States." In Barry R. Chiswick, ed. *Immigration, Language and Ethnicity: Canada and the United States*. Washington, D.C.: American Enterprise Institute, 145-166.

STATISTICS CANADA (1980-98). *Survey of Consumer Finances, Individuals Age 15 and Over, With or Without Income*, Ottawa: Statistics Canada.

STEWART, J. and T. Hyclak (1984). "An analyses of earnings profiles of Immigrants." *Review of Economics and Statistics*. Vol. 66, No. 2 (May), 292-303.

ANALYTICAL STUDIES
RESEARCH PAPER SERIES

No. 1 *Behavioural Response in the Context of Socio-Economic Microanalytic Simulation,* **Lars Osberg** **(April 1986)**

No. 2 *Unemployment and Training,* **Garnett Picot** **(1987)**

No. 3 *Homemaker Pensions and Lifetime Redistribution,* **Michael Wolfson** **(August 1987)**

No. 4 *Modeling the Lifetime Employment Patterns of Canadians,* **Garnett Picot** **(Winter 1986)**

No. 5 *Job Loss and Labour Market Adjustment in the Canadian Economy,* **Garnett Picot and Ted Wannell** **(1987)**

No. 6 *A System of Health Statistics: Toward a New Conceptual Framework for Integrating Health Data,* **Michael C. Wolfson** **(March 1990)**

No. 7 *A Prototype Micro-Macro Link for the Canadian Household Sector,* **Hans J. Adler and Michael C. Wolfson** **(August 1987)**

No. 8 *Notes on Corporate Concentration and Canada's Income Tax,* **Michael C. Wolfson** **(October 1987)**

No. 9 *The Expanding Middle: Some Canadian Evidence on the Deskilling Debate,* **John Myles** **(Fall 1987)**

No. 10 *The Rise of the Conglomerate Economy,* **Jorge Niosi** **(1987)**

No. 11 *Energy Analysis of Canadian External Trade: 1971 and 1976,* **K.E. Hamilton** **(1988)**

No. 12 *Net and Gross Rates of Land Concentration,* **Ray D. Bollman and Philip Ehrensaft** **(1988)**

No. 13 *Cause-Deleted Life Tables for Canada (1972 to 1981): An Approach Towards Analyzing Epidemiological Transition,* **Dhruva Nagnur and Michael Nagrodski** **(November 1987)**

No. 14 *The Distribution of the Frequency of Occurrence of Nucleotide Subsequences, Based on Their Overlap Capability,* **Jane F. Gentleman and Ronald C. Mullin** **(1988)**

No. 15 *Immigration and the Ethnolinguistic Character of Canada and Quebec,* **Réjean Lachapelle** **(1988)**

No. 16 *Integration of Canadian Farm and Off-Farm Markets and the Off-Farm Work of Women, Men and Children,* **Ray D. Bollman and Pamela Smith** **(1988)**

No. 17 *Wages and Jobs in the 1980s: Changing Youth Wages and the Declining Middle,* **J. Myles, G. Picot and T. Wannell** **(July 1988)**

No. 18 *A Profile of Farmers with Computers,* **Ray D. Bollman** **(September 1988)**

No. 19 *Mortality Risk Distributions: A Life Table Analysis,* **Geoff Rowe** **(July 1988)**

No. 20 *Industrial Classification in the Canadian Census of Manufactures: Automated Verification Using Product Data,* **John S. Crysdale** **(January 1989)**

No. 21 *Consumption, Income and Retirement,* **A.L. Robb and J.B. Burbridge** **(1989)**

No. 22 *Job Turnover in Canada's Manufacturing Sector,* ***John R. Baldwin and Paul K. Gorecki (Summer 1989)***

No. 23 *Series on The Dynamics of the Competitive Process,* ***John R. Baldwin and Paul K. Gorecki (1990)***

A. *Firm Entry and Exit Within the Canadian Manufacturing Sector.*
B. *Intra-Industry Mobility in the Canadian Manufacturing Sector.*
C. *Measuring Entry and Exit in Canadian Manufacturing: Methodology.*
D. *The Contribution of the Competitive Process to Productivity Growth: The Role of Firm and Plant Turnover.*
E. *Mergers and the Competitive Process.*
F. *n/a*
G. *Concentration Statistics as Predictors of the Intensity of Competition.*
H. *The Relationship Between Mobility and Concentration for the Canadian Manufacturing Sector.*

No. 24 *Mainframe SAS Enhancements in Support of Exploratory Data Analysis,* ***Richard Johnson, Jane F. Gentleman and Monica Tomiak (1989)***

No. 25 *Dimensions of Labour Market Change in Canada: Intersectoral Shifts, Job and Worker Turnover,* ***John R. Baldwin and Paul K. Gorecki (1989)***

No. 26 *The Persistent Gap: Exploring the Earnings Differential Between Recent Male and Female Postsecondary Graduates,* ***Ted Wannell (1989)***

No. 27 *Estimating Agricultural Soil Erosion Losses From Census of Agriculture Crop Coverage Data,* ***Douglas F. Trant (1989)***

No. 28 *Good Jobs/Bad Jobs and the Declining Middle: 1967-1986,* ***Garnett Picot, John Myles, Ted Wannel (1990)***

No. 29 *Longitudinal Career Data for Selected Cohorts of Men and Women in the Public Service, 1978-1987,* ***Garnett Picot and Ted Wannell (1990)***

No. 30 *Earnings and Death-Effects Over a Quarter Century,* ***Michael Wolfson, Geoff Rowe, Jane F. Gentleman and Monica Tomiak (1990)***

No. 31 *Firm Response to Price Uncertainty: Tripartite Stabilization and the Western Canadian Cattle Industry,* ***Theodore M. Horbulyk (1990)***

No. 32 *Smoothing Procedures for Simulated Longitudinal Microdata,* ***Jane F. Gentleman,Dale Robertson and Monica Tomiak (1990)***

No. 33 *Patterns of Canadian Foreign Direct Investment Abroad,* ***Paul K. Gorecki (1990)***

No. 34 *POHEM - A New Approach to the Estimation of Health Status Adjusted Life Expectancy,* ***Michael C. Wolfson (1991)***

No. 35 *Canadian Jobs and Firm Size: Do Smaller Firms Pay Less?,* ***René Morissette (1991)***

No. 36 *Distinguishing Characteristics of Foreign High Technology Acquisitions in Canada's Manufacturing Sector,* ***John R. Baldwin and Paul K. Gorecki (1991)***

No. 37 *Industry Efficiency and Plant Turnover in the Canadian Manufacturing Sector,* ***John R. Baldwin (1991)***

No. 38 *When the Baby Boom Grows Old: Impacts on Canada's Public Sector,* ***Brian B. Murphy and Michael C. Wolfson (1991)***

No. 39 *Trends in the Distribution of Employment by Employer Size: Recent Canadian Evidence,* **Ted Wannell (1991)**

No. 40 *Small Communities in Atlantic Canada: Their Industrial Structure and Labour Market Conditions in the Early 1980s,* **Garnett Picot and John Heath (1991)**

No. 41 *The Distribution of Federal/Provincial Taxes and Transfers in Rural Canada,* **Brian B. Murphy (1991)**

No. 42 *Foreign Multinational Enterprises and Merger Activity in Canada,* **John Baldwin and Richard Caves (1992)**

No. 43 *Repeat Users of the Unemployment Insurance Program,* **Miles Corak (1992)**

No. 44 *POHEM -- A Framework for Understanding and Modeling the Health of Human Populations,* **Michael C. Wolfson (1992)**

No. 45 *A Review of Models of Population Health Expectancy: A Micro-Simulation Perspective,* **Michael C. Wolfson and Kenneth G. Manton (1992)**

No. 46 *Career Earnings and Death: A Longitudinal Analysis of Older Canadian Men,* **Michael C. Wolfson, Geoff Rowe, Jane Gentleman and Monica Tomiak (1992)**

No. 47 *Longitudinal Patterns in the Duration of Unemployment Insurance Claims in Canada,* **Miles Corak (1992)**

No. 48 *The Dynamics of Firm Turnover and the Competitive Process,* **John Baldwin (1992)**

No. 49 *Development of Longitudinal Panel Data from Business Registers: Canadian Experience,* **John Baldwin, Richard Dupuy and William Penner (1992)**

No. 50 *The Calculation of Health-Adjusted Life Expectancy for a Canadian Province Using a Multi-Attribute Utility Function: A First Attempt,* **J.-M. Berthelot, R. Roberge and M.C. Wolfson (1992)**

No. 51 *Testing the Robustness of Entry Barriers,* **J.R. Baldwin and M. Rafiquzzaman (1993)**

No. 52 *Canada's Multinationals: Their Characteristics and Determinants,* **Paul K. Gorecki (1992)**

No. 53 *The Persistence of Unemployment: How Important were Regional Extended Unemployment Insurance Benefits?,* **Miles Corak, Stephen Jones (1993)**

No. 54 *Cyclical Variation in the Duration of Unemployment Spells,* **Miles Corak (1992)**

No. 55 *Permanent Layoffs and Displaced Workers: Cyclical Sensitivity, Concentration, and Experience Following the Layoff,* **Garnett Picot and Wendy Pyper (1993)**

No. 56 *The Duration of Unemployment During Boom and Bust,* **Miles Corak (1993)**

No. 57 *Getting a New Job in 1989-90 in Canada,* **René Morissette (1993)**

No. 58 *Linking Survey and Administrative Data to Study Determinants of Health,* **P. David, J.-M. Berthelot and C. Mustard (1993)**

No. 59 *Extending Historical Comparability in Industrial Classification,* **John S. Crysdale (1993)**

No. 60 *What is Happening to Earnings Inequality in Canada?,* **R. Morissette, J. Myles and G. Picot (June 1994)**

No. 61 *Structural Change in the Canadian Manufacturing Sector, (1970-1990),* **J. Baldwin and M. Rafiquzzaman (July 1994)**

No. 62 *Unemployment Insurance, Work Disincentives, and the Canadian Labour Market: An Overview,* **Miles Corak (January 1994)**

No. 63 *Recent Youth Labour Market Experiences in Canada,* **Gordon Betcherman and René Morissette (July 1994)**

No. 64 *A Comparison of Job Creation and Job Destruction in Canada and the United States,* **John Baldwin, Timothy Dunne and John Haltiwanger (July 1994)**

No. 65 *What is Happening to Weekly Hours Worked in Canada?,* **René Morissette and Deborah Sunter (June 1994)**

No. 66 *Divergent Inequalities -- Theory, Empirical Results and Prescriptions,* **Michael C. Wolfson (May 1995)**

No. 67 *XEcon: An Experimental / Evolutionary Model of Economic Growth,* **Michael C. Wolfson (June 1995)**

No. 68 *The Gender Earnings Gap Among Recent Postsecondary Graduates, 1984-92,* **Ted Wannell and Nathalie Caron (November 1994)**

No. 69 *A Look at Employment-Equity Groups Among Recent Postsecondary Graduates: Visible Minorities, Aboriginal Peoples and the Activity Limited,* **Ted Wannell and Nathalie Caron (November 1994)**

No. 70 *Employment Generation by Small Producers in the Canadian Manufacturing Sector,* **John R. Baldwin and Garnett Picot (November 1994)**

No. 71 *Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts,* **Garnett Picot, John Baldwin and Richard Dupuy (November 1994)**

No. 72 *Selection Versus Evolutionary Adaptation: Learning and Post-Entry Performance,* **J. Baldwin and M. Rafiquzzaman (May 1995)**

No. 73 *Business Strategies in Innovative and Non-Innovative Firms in Canada,* **J. Baldwin and J. Johnson (February 1995)**

No. 74 *Human Capital Development and Innovation: The Case of Training in Small and Medium Sized-Firms,* **J. Baldwin and J. Johnson (March 1995)**

No. 75 *Technology Use and Industrial Transformation: Emprirical Perspectives,* **John Baldwin, Brent Diverty and David Sabourin (August 1995)**

No. 76 *Innovation: The Key to Success in Small Firms,* **John R. Baldwin (February 1995)**

No. 77 *The Missing Link: Data on the Demand side of Labour Markets,* **Lars Osberg (April 1995)**

No. 78 *Restructuring in the Canadian Manufacturing Sector from 1970 to 1990: Industry and Regional Dimensions of Job Turnover,* **J. Baldwin and M. Rafiquzzaman (July 1995)**

No. 79 *Human Capital and the Use of Time,* **Frank Jones (June 1995)**

No. 80 *Why Has Inequality in Weekly Earnings Increased in Canada?,* **René Morissette (July 1995)**

No. 81 *Socio-Economic Statistics and Public Policy: A New Role For Microsimulation Modeling,* **Michael C. Wolfson (July 1995)**

No. 82 *Social Transfers, Changing Family Structure, and Low Income Among Children,* **Garnett Picot and John Myles (September 1995)**

No. 83 *Alternative Measures of the Average Duration of Unemployment,* **Miles Corak and Andrew Heisz (October 1995)**

No. 84 *The Duration of Unemployment: A User Guide,* **Miles Corak and Andrew Heisz (December 1995)**

No. 85 *Advanced Technology Use in Manufacturing Establishments,* **John R. Baldwin and Brent Diverty (November 1995)**

No. 86 *Technology Use, Training and Plant-Specific Knowledge in Manufacturing Establishments,* **John R. Baldwin, Tara Gray and Joanne Johnson (December 1995)**

No. 87 *Productivity Growth, Plant Turnover and Restructuring in the Canadian Manufacturing Sector,* **John R. Baldwin (November 1995)**

No. 88 *Were Small Producers the Engines of Growth in the Canadian Manufacturing Sector in the 1980s?,* **John R. Baldwin (October 1996)**

No. 89 *The Intergenerational Income Mobility of Canadian Men,* **Miles Corak and Andrew Heisz (January 1996)**

No. 90 *The Evolution of Payroll Taxes in Canada: 1961 - 1993,* **Zhengxi Lin, Garnett Picot and Charles Beach (February 1996)**

No. 91 *Project on Matching Census 1986 Database and Manitoba Health Care Files: Private Households Component,* **Christian Houle, Jean-Marie Berthelot, Pierre David, Cam Mustard, L. Roos and M.C. Wolfson (March 1996)**

No. 92 *Technology-induced Wage Premia in Canadian Manufacturing Plants during the 1980s,* **John Baldwin, Tara Gray and Joanne Johnson (December 1996)**

No. 93 *Job Creation by Company Size Class: Concentration and Persistence of Job Gains and Losses in Canadian Companies,* **Garnett Picot and Richard Dupuy (April 1996)**

No. 94 *Longitudinal Aspects of Earnings Inequality in Canada,* **René Morissette and Charles Bérubé (July 1996)**

No. 95 *Changes in Job Tenure and Job Stability in Canada,* **Andrew Heisz (November 1996)**

No. 96 *Are Canadians More Likely to Lose Their Jobs in the 1990s?,* **Garnett Picot and Zhengxi Lin (August 6, 1997)**

No. 97 *Unemployment in the Stock and Flow,* **Michael Baker, Miles Corak and Andrew Heisz (September 1996)**

No. 98 *The Effect of Technology and Trade on Wage Differentials Between Nonproduction and Production Workers in Canadian Manufacturing,* **John R. Baldwin and Mohammed Rafiquzzaman (May 1998)**

No. 99 *Use of POHEM to Estimate Direct Medical Costs of Current Practice and New Treatments Associated with Lung Cancer in Canada,* **C. Houle, B.P. Will, J.-M. Berthelot, Dr. W.K. Evans (May 1997)**

No.100 *An Experimental Canadian Survey That Links Workplace Practices and Employee Outcomes: Why it is Needed and How it Works,* **Garnett Picot, Ted Wannell (May 1997)**

No.101 *Innovative Activity in Canadian Food Processing Establishments: The Importance of Engineering Practices,* **John Baldwin and David Sabourin (November 1999)**

No. 102 *Differences in Strategies and Performances of Different Types of Innovators,* ***John R. Baldwin and Joanne Johnson (December 1997)***

No.103 *Permanent Layoffs in Canada: Overview and Longitudinal Analysis,* ***Garnett Picot, Zhengxi Lin and Wendy Pyper (September, 1997)***

No.104 *Working More? Working Less? What do Canadian Workers Prefer?,* ***Marie Drolet and René Morissette (May 20, 1997)***

No.105 *Growth of Advanced Technology Use in Canadian Manufacturing During the 1990's,* ***by John Baldwin, Ed Rama and David Sabourin (December 14, 1999)***

No.106 *Job Turnover and Labour Market Adjustment in Ontario from 1978 to 1993,* ***by Zhengxi Lin and Wendy Pyper (1997)***

No.107 *The Importance of Research and Development for Innovation in Small and Large Canadian Manufacturing Firms,* ***John R. Baldwin (September 24, 1997)***

No.108 *International Competition and Industrial Performance: Allocative Efficiency, Productive Efficiency, and Turbulence,* ***John R. Baldwin and Richard E. Caves (October 1997)***

No.109 *The Dimensions of Wage Inequality among Aboriginal Peoples,* ***Rachel Bernier (December 1997)***

No.110 *Trickling Down or Fizzling Out? Economic Performance, Transfers, Inequality and Low Income,* ***Myles Zyblock and Zhengxi Lin (December 10, 1997)***

No.111 *Corporate Financial Leverage: A Canada - U.S. Comparison, 1961-1996,* ***Myles Zyblock (December 1997)***

No.112 *An explanation of the Increasing Age Premium,* ***Constantine Kapsalis (July 1998)***

No.113 *The Intergenerational Earnings and Income Mobility of Canadian Men: Evidence from Longitudinal Income Tax Data,* ***Miles Corak and Andrew Heisz (October, 1998)***

No.114 *Foreign-Born vs Native-Born Canadians: A Comparison of Their Inter-Provincial Labour Mobility,* ***Zhengxi Lin (September 1998)***

No.115 *Living Arrangements and Residential Overcrowding: the situation of older immigrants in Canada, 1991,* ***K.G. Basavarajappa (September 1998)***

No.116 *What is Happening to Earnings Inequality and Youth Wages in the 1990s?,* ***Garnett Picot (July 1998)***

No 117 *The Determinants of the Adoption Lag for Advanced Manufacturing Technologies,* ***John R. Baldwin and Mohammed Rafiquzzaman (August 1998)***

No. 118 *Labour Productivity Differences Between Domestic and Foreign-Controlled Establishments in the Canadian Manufacturing Sector,* ***John R. Baldwin and Naginder Dhaliwal (March 1, 2000)***

No.119 *Technology Adoption: A Comparison Between Canada and the United States,* ***John R. Baldwin and David Sabourin (August 1998)***

No.120 *Are There High-Tech Industries or Only High-Tech Firms? Evidence From New Technology-Based firms,* ***John R. Baldwin and Guy Gellatly (December 1998)***

No.121 *A Portrait of Entrants and Exits,* ***John R. Baldwin (June 1999)***

No.122 *Determinants of Innovative Activity in Canadian Manufacturing Firms: The Role of Intellectual Property Right,* **John R. Baldwin, Petr Hanel and David Sabourin (March 7, 2000)**

No.123 *Innovation and Training in New Firms* **John R. Baldwin (November 2000)**

No.124 *New Views on Inequality Trends in Canada and the United States,* **Michael C. Wolfson and Brian B. Murphy (August 1998 and October 1999 (paper)**

No.125 *Employment Insurance in Canada: Recent Trends and Policy Changes,* **Zhengxi Lin (September 1998)**

No.126 *Computers, Fax Machines and Wages in Canada: What Really Matters?,* **René Morissette and Marie Drolet (October 1998)**

No.127 *Understanding the Innovation Process: Innovation in Dynamic Service Industries,* **Guy Gellatly and Valerie Peters (December 1999)**

No.128 *Recent Canadian Evidence on Job Quality by Firm Size,* **Marie Drolet and René Morissette (November 1998)**

No.129 *Distribution, Inequality and Concentration of Income Among Older Immigrants in Canada, 1990 ,* **K.G. Basavarajappa (April 1999)**

No.130 *Earnings Dynamics and Inequality among Canadian Men, 1976-1992: Evidence from Longitudinal Income Tax Records,* **Michael Baker and Gary Solon (February 1999)**

No 131 *The Returns to Education, and the Increasing Wage Gap Between Younger and Older Workers,* **C. Kapsalis, R. Morissette and G. Picot (March 1999)**

No.132 *Why Do Children Move Into and Out of Low Income: Changing Labour Market Conditions or Marriage and Divorce?,* **G. Picot, M. Zyblock and W. Pyper (March 1999)**

No.133 *Rising Self-Employment in the Midst of High Unemployment: An Empirical Analysis of Recent Developments in Canada,* **Zhengxi Lin, Janice Yates and Garnett Picot (March 1999)**

No.134 *The Entry and Exit Dynamics of Self-Employment in Canada,* **Zhengxi Lin, Garnett Picot and Janice Yates (March 1999)**

No.135 *Death and Divorce: The Long-term Consequences of Parental Loss on Adolescents,* **Miles Corak (June 9, 1999)**

No.136 **Cancelled**

No.137 *Innovation, Training and Success,* **John Baldwin (October 1999)**

No.138 *The Evolution of Pension Coverage of Young and Older Workers in Canada,* **René Morissette and Marie Drolet (December 1999)**

No.139 *Import Competition and Market Power: Canadian Evidence,* **Aileen J. Thompson (April 2000)**

No.140 *Gender Composition and Wages: Why is Canada Different from the United States,* **Michael Baker and Nicole Fortin (August 2000)**

No.141 *The Transition to Work for Canaddian University Graduates: Time to First Job, 1982-1990,* **Julian Betts, Christopher Ferrall and Ross Finnie (December 2000)**

No.142 *Who Moves? A Panel Logit Model Analysis of Interprovincial Migration in Canada,* **Ross Finnie (August 2000)**

No.143 *Differences in Innovator and Non-Innovator Profiles: Small Establishments in Business Services,* **Guy Gellatly (December 1999)**

No.144 *Social Transfers, Earnings and Low-Income Intensity Among Canadian Children, 1981-1996: Highlighting Recent Development in Low-Income Measurement,* **John Myles and Garnett Picot (March 2000)**

No.145 *How Much of Canada's Unemployment is Structural?,* **Lars Osberg and Zhengxi Lin (October 2000)**

No.146 *To What Extent Are Canadians Exposed to Low-Income?,* **René Morissette and Marie Drolet (April, 2000)**

No.147 *The Maturation of Canada's Retirement Income System: Income Levels, Income Inequality and Low-Income among the Elderly,* **John Myles (March 6, 2000)**

No.148 *The Performance of the 1990s Canadian Labour Market,* **Garnett Picot and Andrew Heisz (April, 2000)**

No.149 *Payroll Taxes in Canada Revisited: Structure, Statutory Parameters, and Recent Trends* **Zhengxi Lin (August, 2001)**

No.150 *Patterns of Corporate Diversification in Canada: An Empirical Analysis,* **John R. Baldwin, Desmond Beckstead,Guy Gellatly and Alice Peters (June, 2000)**

No.151 *Multinationals and the Canadian Innovation Process,* **John R. Baldwin and Petr Hanel (June, 2000)**

No.152 *Rural Youth: Stayers, Leavers and Return Migrants,* **Richard Dupuy, Francine Mayer and René Morissette (September 5, 2000)**

No.153 *Female Employment Rates and Labour Market Attachment in Rural Canada,* **Euan Phimster, Esperanza Vera Toscano, Alfons Weersink (December 2000)**

No.154 *Training as a Human Resource Strategy: The Response to Staff Shortages and Technological Change,* **John R. Baldwin and Valerie Peters (April 2001)**

No.155 *Job Tenure, Worker Mobility and the Youth Labour Market during the 1990s,* **G. Picot, A. Heisz and A. Nakamura (March 2001)**

No.156 *The Impact of International Trade on the Wages of Canadians,* **Omar Zakhilwal (December 2000)**

No.157 *The Persistent Gap: New Evidence on the Canadian Gender Wage Gap,* **Marie Drolet (December 2000)**

No.158 *In Search of Intergenerational Credit Constraints Among Canadian Men: Quantile Versus Mean Regression Tests for Binding Crefdit Constraints,* **Nathan D. Grawe (December 2000)**

No.159 *Intergenerational Influences on the Receipt of Unemployment Insurance in Canada and Sweden,* **Miles Corak, Bjorn Gustaffson and Torun Osterberg (December 2000)**

No.160 *Neighbourhood Inequality in Canadian Cities,* **John Myles, Garnett Picot and Wendy Pyper (December 13, 2000)**

No.161 **Cancelled**

No.162 *The Evolution of Job Stability in Canada: Trends and Comparisons to U.S. Results,* **Andrew Heisz (October 16, 2002)**

No.163 *The Effects of Inter-Provincial Mobility on Individuals' Earnings: Panel Model Estimates for Canada,* ***Ross Finnie (October, 2001)***

No.164 *Early Labour Market Outcomes of Recent Canadian University Graduates by Discipline: A Longitudinal, Cross-Cohort Analysis,* ***Ross Finnie (March 2002)***

No.165 *Innovation and Connectivity: The Nature of Market Linkages and Innovation Networks in Canadian Manufacturing Industries,* ***John Baldwin and Alice Peters (May 2001)***

No.166 *An Assessment of EI and SA Reporting in SLID,* ***Constantine Kapsalis (August, 2001)***

No.167 ***Cancelled***

No.168 *Enhancing Food Safety and Productivity: Technology Use in the Canadian Food Processing Industry,* ***John R. Baldwin and David Sabourin (May 2002)***

No.169 *Dynamics of the Canadian Manufacturing Sector in Metropolitan and Rural Regions,* ***John R. Baldwin and Mark Brown with Tara Vinodrai (November 2001)***

No170 *Income Prospects of British Columbia University Graduates,* ***Andrew Heisz (May 2001)***

No.171 *Are the Kids All Right? Intergenerational Mobility and Child Well-being in Canada,* ***Miles Corak (October 2001)***

No.172 *Low-Income Intensity During the 1990s: The Role of Economic Growth, Employment Earnings and Social Transfers,* ***G. Picot, R. Morissette, J. Myles (January 24, 2003)***

No.173 *Impediments to Advanced Technology Adoption for Canadian Manufacturers,* ***John Baldwin and Zhengxi Lin (August, 2001)***

No.174 *Impact of the Adoption of Advanced Information and Communication Technologies on Firm Performance in the Canadian Manufacturing Sector,* ***John R. Baldwin and David Sabourin (October, 2001)***

No.175 *Skill Shortages and Advanced Technology Adoption,* ***David Sabourin (September, 2001)***

No.176 *Which Firms Have High Job Vacancy Rates in Canada?,* ***René Morissette, Xuelin Zhang (October 25, 2001)***

No.177 *A Tale of Three Cities: The Dynamics of Manufacturing in Toronto, Montreal and Vancouver, 1976-1997,* ***Tara Vinodrai (November 2001)***

No.178 *School Performance of the Children of Immigrants in Canada, 1994-98,* ***Christopher Worswick (November 14, 2001)***

No.179 *Changes in the Diversification of Canadian Manufacturing Firms (1973-1997): A Move to Specialization,* ***John R. Baldwin, Desmond Beckstead and Richard Caves (February 2002)***

No.180 *Differences in Interprovincial Productivity Levels,* ***John R. Baldwin, Jean-Pierre Maynard, David Sabourin and Danielle Zietsma (December 2001)***

No.181 *Does Parent or Child Know Best? An Assessment of Parent/Child Agreement in the Canadian National Longitudinal Survey of Children and Youth,* ***Lori Curtis, Martin Dooley and Shelley Phipps*** *(October 23, 2002)*

No.182 *Effects of Selection Criteria and Economic Opportunities on the Characteristics of Immigrants,* ***by Abdurrahman Aydemir*** *(October 23, 2002)*

No.183 *Setting up Shop: Self-Employment Amongst Canadian College and University Graduates,* **Ross Finnie, Christine Laporte, Maud-Catherine Rivard (March 2002)**

No.184 *Winners and Losers in the Labour Market of the 1990s,* **Andrew Heisz, Andrew Jackson, Garnett Picot (February 2002)**

No.185 *Do Neighbourhoods Influence Long Term Labour Market Success? A Comparison of Adults who Grew Up in Different Public Housing Projects,* **Philip Oreopoulos (June 2002)**

No.186 *Wives, Mothers and Wages: Does Timing Matter?* **Marie Drolet (May 1, 2002)**

No.187 *The Evolution of Wealth Inequality in Canada, 1984-1999,* **René Morissette, Xuelin Zhang and Marie Drolet (February 2002)**

No.188 *Management Experience and Diversity in an Aging Organization,* **Ted Wannell and Martin Gravel (August 2002)**

No.189 *The Importance of Entry to Canadian Manufacturing with an Appendix on Measurement Issues,* **John Baldwin, Desmond Beckstead and Andrée Girard (May 2002)**

No.190 *Financing Innovation in New Small Firms : Evidence From Canada,* **John R,. Baldwin, Guy Gellatly and Valérie Gaudreault (May 2002)**

No.191 *Too Far to Go On? Distance to School and University Participation,* **Marc Frenette (June 24, 2002)**

No.192 *Life After Welfare: The Economic Well-Being of Welfare Leavers in Canada during the 1990s,* **Marc Frenette, Garnet Picot (March 26, 2003)**

No.193 *Plant Turnover and Productivity Growth in Canadian Manufacuturing,* **John Baldwin, Wulong Gu (April 2, 2003)**

No.194 *Wage Progression of Less Skilled Workers in Canada: Evidence from the SLID (1993-1998),* **Xuelin Zhang (December 6, 2002)**

No.195 *Do the Falling Earnings of Immigrants Apply to Self-Employed Immigrants?,* **Marc Frenette (December 2002)**

No.196 *Minorities, Cognitive Skills and the Incomes of Canadians,* **Ross Finnie and Ronald Meng (January 24, 2003)**

No.197 *Forthcoming*

No.198 *The Rise in Low-Income Rates Among Immigrants in Canada,* **Garnett Picot and Feng Hou (June 19, 2003)**

No.199 *Alternative Work Practices and Quit Rates: Methodological Issues and Empirical Evidence For Canada,* **René Morissette and Julio Miguel Rosa (March 17, 2003)**

No.200 *Forthcoming*

No.201 *Access to College and University: Does Distance Matter?,* **Marc Frenette (June 2003)**

No.202 *Learning From Failure: Organizational Mortality and the Resource-Based View,* **S. Thornhill and R. Amit (forthcoming)**

No.203 *Effects of Business Cycles on the Labour Market Assimilation of Immigrants,* **Abdurrahman Aydemir (July 31, 2003)**

No.204 *Visible Minority Neighbourhood Enclaves and Labour Market Outcomes of Immigrants*, **Garnett Picot, Feng Hou (July 9, 2003)**

No.205 *Changing Trade Barriers and Canadian Firms: Survival and Exit After the Canada-U.S. Free Trade Agreement*, **Jennifer Baggs (forthcoming)**

No.206 *Neighbourhood Attainment and Residential Segregation Among Toronto's Visible Minorities*, **John Myles and Feng Hou (July 30, 2003)**

No.207 *Life Cycle Bias in the Estimation of Intergerational Earnings Persistence*, **Nathan Grawe (August 5, 2003)**

No.208 **forthcoming**

No.209 **forthcoming**